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GOVERNING THE HEARTLAND: CAN RURAL GOVERNMENTS SURVIVE THE FARM CRISIS?

REPORT

OF THE

SUBCOMMITTEE ON INTERGOVERNMENTAL RELATIONS

OF THE

COMMITTEE ON GOVERNMENTAL AFFAIRS UNITED STATES SENATE

JULY 1986

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LETTER OF TRANSMITTAL

U.S. SENATE,
SUBCOMMITTEE ON INTERGOVERNMENTAL RELATIONS,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC, June 18, 1986.

Hon. WILLIAM V. ROTH, Jr.,
Chairman, Committee on Governmental Affairs, Washington, DC.

DEAR MR. CHAIRMAN: I am herewith transmitting for printing as a committee print a study entitled "Governing the Heartland: Can Rural Communities Survive the Farm Crisis?"

This study was written and researched principally by Dr. Thomas Stinson of the Economic Research Service and the Department of Agricultural and Applied Economics at the University of Minnesota. Dr. Stinson contributed to this report at my request as chairman of the Subcommittee on the Intergovernmental Relations. He was assisted with data collection and analysis by Jeffrey Fortenberry and Fiona Sigalla. Overall direction for the report was provided by Dr. Timothy J. Conlan, assistant staff director of the subcommittee, who also wrote the introduction and the section on policy options. The report was expertly typed by Linda Schwartz. Further assistance was provided by the staffs of the U.S. Advisory Commission on Intergovernmental Relations and the Economic Research Service of the U.S. Department of Agriculture. Nothing in this report, however, should be taken to reflect the official views of the Advisory Commission on Intergovernmental Relations or the Department of Agriculture.

Because this study provides important and unique information on the intergovernmental dimensions of the farm crisis, I believe it will be useful as a committee print for both Members of Congress and the general public.

Sincerely,

DAVE DURENBERGER,
Chairman, Subcommittee on Intergovernmental Relations.

CONTENTS

	Page
Letter of Transmittal	III
Executive Summary	VII
Introduction	1
The Agricultural Economy of the Eighties	5
Property Tax Impacts in Agriculturally Dependent Counties: Detailed Estimates	10
Other Sources of Local Government Revenue	34
Local Government Expenditures	42
Future Impacts on Local Government Spending	54
Long Term Effects	64
Policy Options	68
Conclusion	84
Appendix:	
Table 1	85
Table 2	87
Table 3	88
Table 4	97
Table 5	106
Appendix B—Economic Impacts: A Case Study of Southwest Minnesota	116
Appendix C—Property Tax Delinquency: Statutory Provisions	138
Appendix D—Targeted Fiscal Assistance	146
Appendix E	150

EXECUTIVE SUMMARY

For three years the nation's newspapers have been filled with headlines describing the growing farm crisis. The public has learned of serious financial problems facing America's farmers, and of the massive drops in real farm income and farm land values which have occurred during this decade. Attention has been focused on the direct, often dramatic impacts on individual farmers, their families, and on small businesses in America's agriculturally dependent communities.

Another dimension of the farm crisis has been largely overlooked--the growing threat to the financial viability of rural local governments. Declining farm incomes and farm property values erode the local tax base. At the same time, demands for many publicly provided services increase, creating a squeeze between falling revenues and higher costs. In many communities this financial vise is being tightened further by cuts in federal and state aid.

If these trends continue local officials cannot avoid both cutting services and increasing taxes. In the absence of such actions, local government revenues will fall short of existing expenditure levels by $106 per capita on average in the eight agriculturally dependent multi-county regions examined. Under more pessimistic assumptions about further drops in land values and cuts in intergovernmental aids, per capita revenue shortfalls of $250 or more were estimated for some areas. The higher taxes

and reductions in services necessary to overcome those shortfalls have the potential to permanently change the quality of life in much of rural America.

THE TROUBLED AGRICULTURAL ECONOMY: Since 1980, net farm incomes have fallen precipitously. From 1980 through 1984, real farm incomes averaged only $25 billion in 1982 dollars, down nearly 40 percent from the average of the seventies and down more than 25 percent from the average of the sixties.

When farm incomes decline, main street spending also falls, eliminating jobs and reducing incomes in the local commercial sector. The size and scope of those impacts was estimated for a nine county region in southwestern Minnesota. Assuming that the average farm income levels of the early 1980's continue, there are 3650 fewer commercial sector jobs (about 15 percent) than there would have been, other things equal, had the high income years of the mid-1970's continued.

VANISHING WEALTH: The decline in agricultural income since 1981 has produced an enormous drop in the value of farmland. Nationwide, agricultural land values fell by more than 30 percent, or $227 per acre, during the past four years. Farm land values declined only one other time in the postwar period, in 1954, when they fell by one dollar.

When viewed in constant dollars, the results are even more sobering. Nationwide, between 1982 and 1985, farm land values fell by $146 billion--a loss of wealth for farm land owners equal

to the combined assets of IBM, GE, Kodak, Proctor & Gamble, 3M, Dow Chemical, McDonalds, RCA, Upjohn, Weyerhauser, and CBS.

IMPACTS ON LOCAL PROPERTY TAXES: Over time this massive devaluation in farm assets will significantly erode the local tax base in some communities. Those impacts are already evident in Minnesota where taxable valuations dropped about 25 percent between 1983 and 1985. In other states, agricultural assessed values have remained relatively stable when measured in current dollars because assessment systems based on the productivity of agricultural land are slower to adjust to changes in market values. Nevertheless, taxable valuations have already dropped an average of 20 percent since 1981 in inflation adjusted dollars. With land values continuing to fall, it is only a matter of time before declines in assessed valuations in current dollars are observed.

Dramatically increased rates of property tax delinquencies are a leading indicator of future problems. Between 1980 and 1985, annual delinquencies jumped sevenfold in the Nebraska localities examined--rising from $.75 million to over $5.5 million. Delinquencies also more than doubled in the Iowa, Kansas, Minnesota, and Montana communities surveyed.

THE SERVICE SQUEEZE: Rural governments are being squeezed by increased service demands as well as falling revenues. Many of the new demands for services are a direct response to increasing unemployment in the agriculturally dependent regions. Although national unemployment rates fell 9 percent from January

1985 to January,1986, unemployment rose an average of 10 percent in five of the states studied and fell in only two.

Rising unemployment and financial stress are taking their toll on rural Americans and straining social service facilities. A regional mental health center in southwest Minnesota reports outpatient services up 30 percent since 1984; 24 hour crisis intervention activities are up over 300 percent; and substance and family abuse consultations are up 67 percent. Similarly, overall social service demands are up 30 percent in northern Iowa, despite declining population.

DIM PROSPECTS FOR STATE AID: Financially stressed local governments can expect little added assistance from their states. State tax bases also depend on the health of the agricultural economy, and many states are under severe budgetary stress. Six of the eight study states had tax revenues grow more slowly than the national average in fiscal 1985, 1986, or both. There were absolute declines in revenues in four of those states in either 1985 or 1986. Six of the states surveyed were forced to take the extreme step of making mid-year reductions in their fiscal 1986 budgets.

FEDERAL AID CUTS COMPOUND THE FISCAL SQUEEZE: Federal aid reductions, past and prospective, are compounding the impact of the farm crisis on local governments. Between 1982 and 1984, federal aid to general purpose local governments, excluding General Revenue Sharing, rose by .1 percent nationwide. In the

eight agriculturally dependent regions examined in this study, federal aid actually declined by 18 percent during that same period.

The proposed elimination of revenue sharing will hit rural local governments twice as hard as the average locality. Revenue sharing comprised 44.5 percent of all federal aid received by agriculturally dependent local governments, but only 21.8 percent of the federal aid received by all general purpose local goverments.

POLICY RESPONSES: The fiscal bind confronting rural governments is both immediate and long term. In the short run the difficulties stem from the rapid rise in property tax delinquencies. The resulting cash flow problems are being compounded by reductions in state and federal aid.

Ultimately, the most serious problems will be posed by the dramatic declines in farm land values. But, because assessed values in most states have only begun to reflect the steep fall in market values, serious long term erosion in public services can still be avoided if prompt actions are taken at all levels of government. For local governments this means continuing efforts to "do more with less," although there is evidence that many have already exhausted the efficiency gains from cutback management. For state governments, it means diversifying and broadening the tax base, and attempting to maintain a constant level of state aids through tough fiscal times. For the federal government it means preserving a leaner, more targeted version of general aid

to local governments and maintaining those portions of the tax code that support local economic development and self-help.

The farm crisis ranks among the most severe regional economic recessions since the 1930s. If left unchecked, it has the potential to seriously--and in some cases permanently--undermine the fiscal foundations of many rural communities. But, intelligent policy decisions made before the situation worsens, can ease the impacts of transition to a more stable agricultural economy, and rural local governments can avoid becoming another victim of the farm crisis.

GOVERNING THE HEARTLAND:

CAN RURAL COMMUNITIES SURVIVE THE FARM CRISIS

Americans recognize that there is a farm crisis. The statistics, charts and graphs which underscore the problems are regularly featured in the nightly news:

--net farm incomes, measured in constant dollars, declined by 64% between 1979 and 1983. During the 1980's net farm income has averaged nearly 40 percent less than in the seventies.

--farm land values have fallen by more than 30 percent since 1981. In the five core states of the corn belt, the average acre of farm land is worth less than half its 1981 value.

--farm debt-to-asset ratios climbed 29% between 1979 and 1984; currently, one-sixth of all medium sized commercial farms and one-fifth of all large commercial farms are courting bankruptcy with debt-asset ratios over 70%;

--130 banks failed in 1985, the highest number since the Great Depression and four times the number of combined failures in 1979-1981;

Even these distressing statistics do not tell the full story. The human face of the farm crisis has also been the subject of much attention, including dark stories of personal losses and family tragedy. That these dimensions of the farm crisis command center stage is not surprising. But, they are only the first effects of a declining agricultural economy. The farm crisis threatens much of rural America in other less immediate ways,

ways which are far less obvious but potentially as serious. Many rural communities are now questioning whether they will survive the financial stress brought on by declining farm incomes.

The Governmental Dimension

As farm incomes and property values have declined, the state and local tax base has steadily eroded. Depressed conditions in the farm-dependent local business community have further increased the financial problems of rural communities.

At the local level, declining land values ultimately translate into declines in local assessed valuations--the cornerstone of most communities' property tax base. Increasingly, small town officials are faced with a choice between higher local tax rates or lower quality schools and other local services. This study documents those problems, and it finds the following:

--the real value of the agricultural tax base has shrunk by 20 percent or more since 1982, and is expected to decline further.

--tax delinquency rates have increased by 100 percent or more in many areas.

--declines in nonfarm incomes, employment, and property values caused by lower farm incomes magnify the farm crisis'impact on rural communities.

--declines in agricultural property values (other things equal) would produce a combination of tax increases and cuts in expenditures ranging from $13 to $199 per capita, based on 1982 spending levels in the agriculturally dependent counties studied.

Rural local governments face the prospect of a shrinking revenue base for the rest of this decade and longer. Ordinarily, they would turn to state government for assistance. But, farm

problems also affect state revenues, particularly in those states whose economies are most dependent on agriculture.

--In three of eight states examined, state personal income lagged at least 20% behind the national average between 1982-1985;

--Since 1984, state government tax collections lagged at least 20% below the national average in five of the eight states this study examined.

--Seventy-five percent (more than twice the national average) of the agricultural states studied reported mid-year reductions in their 1986 budgets due to smaller than anticipated revenue collections. State aid to education has been cut in five of these same eight states.

Revenues are being squeezed at both the state and local levels, but service demands are increasing. Emergency hotline programs to give emotional and financial counseling to farm families have been established, and more than $100 million annually redirected to provide direct assistance to troubled farmers. Off-farm unemployment rates also are trending upward in five of the affected states, in marked contrast to falling unemployment nationwide.

Federal government cutbacks will add to the problem. Between 1980 and 1985 there was a 23 percent cut in real dollars in the amount of federal aid provided state and local governments. Prospects for additional aid given Gramm-Rudman budget restrictions look bleak, and General Revenue Sharing, a source of substantial aid for rural communities, is scheduled to terminate in 1986.

In short, the farm crisis has an important third dimension--a governmental dimension--which both reflects and magnifies the economic problems now confronting farmers, bankers,

and rural local businessmen across America's heartland. In some areas the revenues needed to support even minimally adequate elementary and secondary education programs and other necessary social services may not be available in the future. Severe long term dislocations affecting the national economy are possible.

Intelligent policy decisions, implemented now at the federal and state as well as the local level, will help communities overcome the problems brought on by the farm crisis. But, the stakes are high. If the deterioration of the public sector is ignored, it may contribute to the creation of separate societies for rural and urban residents--societies with vastly different standards of living and qualities of life.

THE AGRICULTURAL ECONOMY OF THE EIGHTIES

Economic hardship is nothing new for rural America. In 1950, more than 23 million people lived on farms, and average farm incomes were substantially below those in the non-farm sector. Those low farm incomes, coupled with technological change (primarily increased mechanization) and the lure of higher wage urban jobs produced a large outmigration of low-wage farm laborers and small farmers during the 1950's. Still, per capita disposable incomes of farmers averaged only 65 percent of those of nonfarmers from 1960 through 1969, and outmigration continued. By 1970 less than 10 million farmers remained.

During the 1970's farm incomes improved. From 1971 through 1975 per capita disposable incomes of farmers averaged better than 90 percent of those of nonfarmers, as ever expanding export markets reduced excess capacity. Net farm income grew to average $41 billion ($1982) for the decade of the seventies, a 20 percent real increase over the $34 billion average of the 1960's. Farm populations continued to decline, however, dropping to 7.2 million by 1980.

Since 1980 net farm incomes have fallen precipitously. From 1980 through 1984 real net farm income averaged only $25 billion ($1982) down nearly 40 percent from the average of the seventies, and more than 25 percent from the average of the sixties.

Today's farm income problems will not be solved by consolidation, mechanization and migration to urban areas. Most savings available from those measures have been exhausted. Nor is it likely that exports will provide the same stimulation they

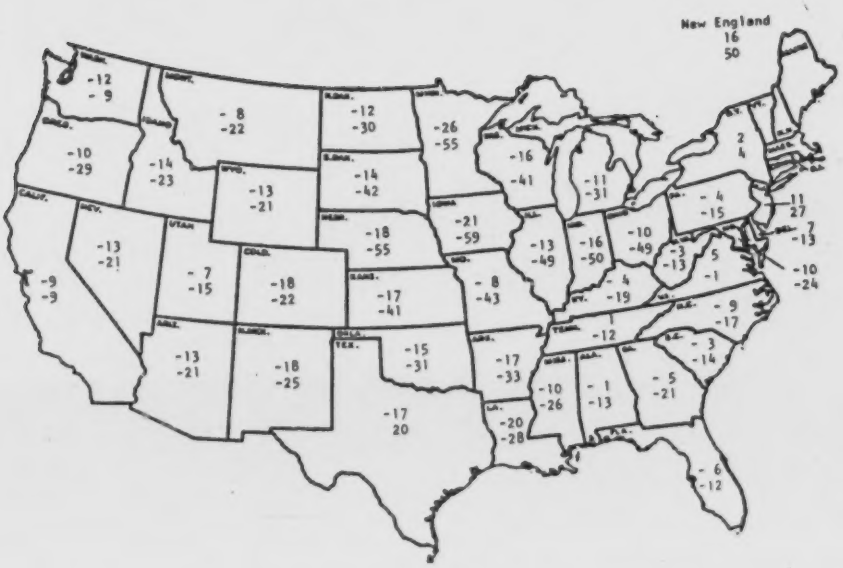
did in the 1970's. Instead, farm asset values are being written down either explicitly when land is sold, or implicitly through declines in individual farmer's wealth, until values are reached at which returns comparable to those on investments elsewhere in the economy can be attained.

The result of this asset re-valuation has been a steady decline in the value of farm land since 1981. Nationwide, USDA estimates that agricultural land values have fallen by more than 30 percent, from $823 per acre in 1982 to $596 per acre in 1986. The declines have been even greater in the grain producing areas of the midwest. (fig. 1) Farm land values fell only one other time in the postwar period, in 1954 when they dropped from $83 to $82 per acre.

When viewed in real dollars--that is in dollars of constant buying power--results are even more sobering (fig. 2). The real value of farm land has declined only 12 times since 1945. Four of those years were scattered through the fifties, and two were in the early seventies. The remaining six have come since 1981. Nationally, the real value of farm land has retraced all increases since the early seventies, and still seems not to have reached a bottom.

The losses in individual wealth, and in the real buying power associated with that wealth, are enormous. Between 1982 and 1985 USDA estimates that farm land values fell by $146 billion. These losses have caused great personal hardship to America's family farmers. While the magnitude of their losses is almost impossible to comprehend, some perspective can be gained

FIGURE 1: Percent Change in Average Value of Farm Real Estate Per Acre
April 1, 1985 - February 1, 1986 and
February 1, 1981 - February 1, 1986



Top No.: Change from 1985 to 1986
Bottom No.: Change from 1981 to 1986
Source: USDA

by noting that personal losses in farmer wealth, $146 billion, were slightly more than the total value of all farm real estate in the states of Illinois, Wisconsin, Minnesota, North Dakota, South Dakota, Iowa, and Nebraska in 1985. Put another way, the loss in farm real estate values between 1982 and 1985 is equal to the combined assets of IBM, General Electric, Eastman Kodak, 3M, Proctor and Gamble, Dow Chemical, McDonalds, RCA, Upjohn, Weyerhaeuser, and CBS.

This same decline in land value will eventually be reflected in reductions in the local property tax base. Rural local governments will be faced with the problem of funding adequate levels of public services from declining revenues. The write down of agricultural property values, and the accompanying decreases in the local tax base have the potential to permanently change the quality of life in rural America, particularly in those regions primarily dependent on agriculture.

PROPERTY TAX IMPACTS IN AGRICULTURALLY DEPENDENT COUNTIES: DETAILED ESTIMATES

The restructuring of agriculture is underway, and it is beginning to affect rural local governments. Early recognition of the severity of those problems likely to emerge is essential if solutions are to be found and permanent, long term damage avoided. Unfortunately, national data do not exist which are both timely and in sufficient geographic detail to allow identification of those communities and regions where the local impacts of decreasing farm incomes and land values have been the greatest. The Census of Government, the most recent nationwide compilation of data on all units of local government, was last conducted in 1982. Virtually all the declines in land values have occurred since that time, making that data useful for marking the peak of rural local government's prosperity, but inappropriate for measuring the impacts of recent fiscal stress.

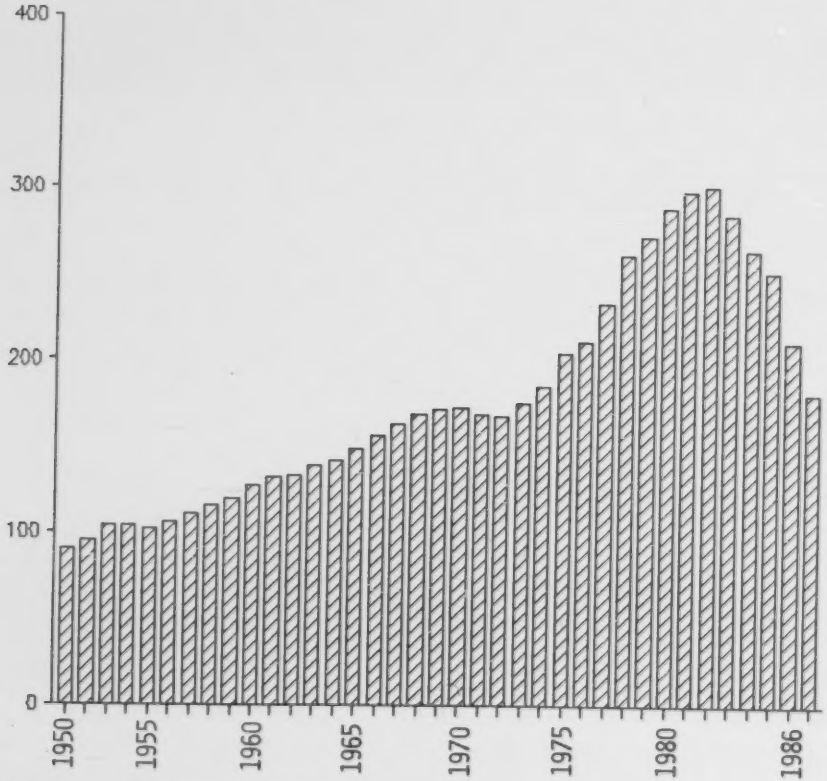
To compensate for the lack of timely national data on changes in rural local government finances, this section presents primary data collected from local governments in rural, multi-county regions in eight states (Arkansas, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, and North Dakota) thought to be particularly hard hit by the farm crisis. Financial records for recent years were collected from state and local governments in the sample region, and supplemented by a telephone survey of local officials.

Because the impact of declining farm property values on local government depends heavily on how important agriculture is to the local economy, crop reporting districts with a high percentage of agriculturally dependent counties as identified by USDA's Economic Research Service (Bender, et. al., 1985) were used as the units of analysis. A map outlining the eight crop reporting districts surveyed is given in figure 3. A list of the counties included in each state is included in Appendix A.

Counties were considered by USDA to be dependent on agriculture if a weighted average of at least 20 percent of all labor and proprietor's income from 1975 through 1979 came from farming. Twenty-nine percent of all non-metro counties, 702 counties, met that criterion. These counties are not the only ones to be affected by declining farm incomes and lower land values. They are, however, those in which impacts will be most severe.

Focusing on agriculturally dependent counties is appropriate because large decreases in agricultural incomes and land values may have relatively little impact on the public sector in areas where manufacturing, mining, or forestry dominate, even though impacts on the wealth of individual farmers will be similar. For communities where agriculture is the major source of income and wealth, however, even modest percentage reductions in agricultural property values may have major impacts on the local tax base and on local government.

FIGURE 2: INDEX OF REAL VALUE OF U.S. FARM LAND, 1950-1986.



SOURCE: ECONOMIC RESEARCH SERVICE, USDA.

FIGURE 3: CROP REPORTING DISTRICTS INCLUDED IN SURVEY OF RURAL LOCAL GOVERNMENT FINANCES

Agricultural Land Values in Selected Crop Reporting Districts

Nationally, the real, per acre value of farm land (land value in current dollars divided by the consumer price index) began trending down in 1980. By 1986 it had decreased to a level equal to those of the early 1970's. Only three states outside New England have seen increases in farm land prices since 1981. In ten states--Illinois, Iowa, Kansas, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin--declines of over 40 percent in farm land value were observed. Three states--Minnesota, Iowa, and Indiana--have had farmland drop in value by more than 50 percent.

USDA estimates of changes in land values in each of the crop reporting districts, are shown in figure 4. Actual values are given in Appendix Table 2. Values in both current and 1985 dollars (deflated by the GNP personal consumption expenditure deflator) are shown for the years 1977-1985.

The pattern in each crop reporting district surveyed is nearly the same. In current dollars, land values increased by 50 percent or more between 1977 and 1981, only to drop back to 1977 or lower levels by 1986. Farmers have lost an enormous amount oftheir personal wealth. In Minnesota alone, the loss in farm real estate values between 1982 and 1986 was in excess of $20 billion, or an amount equal to the current (1986) value of all farmland in Missouri, or Kansas, or Nebraska.

Looking at changes in land values in current (non-deflated) dollars understates the extent of the potential problem facing local governments. To see the true impact of those lower land

values one must compare using dollars of constant buying power. If local revenues are to be sufficient to continue public services at the same level without a millage rate increase, the local property tax base must increase in value at the same rate as inflation. If the real value of the tax base declines, even though the value in current dollars increases or remains constant, higher tax rates will be necessary to maintain existing service levels.

Land values in real, 1985 dollars also are shown in figure 4. Their pattern is substantially different. Only in Arkansas did values increase over 30 percent. In Kansas and North Dakota real values actually declined between 1977 and 1981. Elsewhere increases from 1977 to 1981 were more moderate, reflecting the fact that during that time prices of all tangible assets increased rapidly due to inflation. Once land values began to decline, however, inflation adjustments accentuated their decline. Since 1981 many counties have seen more than a 50% drop in the real value of farmland.

This decrease in farmer wealth affects local consumer buying patterns and farm management decisions and thus spreads through the region's economy. The local public sector is one of the areas most severely affected. If the local tax base were comprised entirely of agricultural land, and assessments tracked land values precisely, a decrease of 50 percent in land values would cut in half the quantity of goods and services which local governments could provide given the tax revenue from a fixed

millage levy. Local officials in this situation are faced with a no win set of choices--either increase taxes or cut essential services.

In reality the local tax base includes more than agricultural land, even in the most agriculturally dependent county, and assessed values have not followed farm land values perfectly. Further, not all local government revenues come from property taxes. Each of these factors will moderate the impacts of declining farm land values on the local public sector. Differences among states in these variables are examined below.

Assessed Values

Agricultural land made up varying proportions of the local tax base in the study states. (figure 5) In the Nebraska, Iowa, Minnesota, North Dakota crop reporting districts chosen, more than 45 percent of the local property tax base was classified as agricultural land. The Minnesota crop reporting district, with 78 percent of the property tax base agriculture was the most dependent.

In Montana and Kansas, less than 15 percent of assessed value is agricultural because oil and gas producing properties are also located in the crop reporting districts studied. Income from such property is included in the local property tax base, and dominates the value of all other property. In those regions, even though agriculture is the major source of income, it is not the major source of support for local government. When oil and gas prices are high and agricultural land values dropping, this diversification of the local tax base eases fiscal pressures on

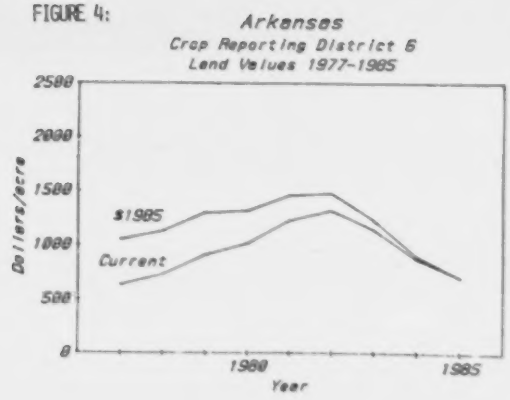
local government. But, if oil and gas prices fall, as has recently occurred, local financial problems will be magnified.

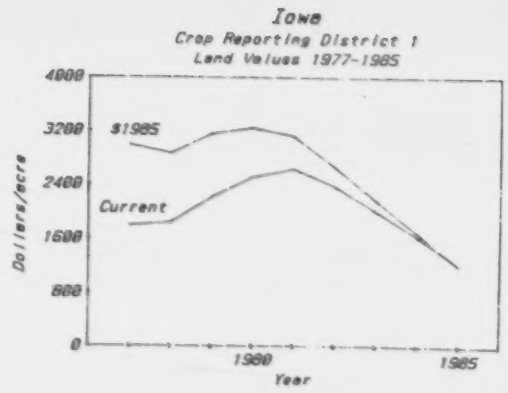
Agricultural assessed values for 1981-1985 in each of the 8 multicounty crop reporting districts examined are shown in figure 6. Actual values are given in Appendix Table 3. To emphasize the impact of changes in agricultural income on local government's purchasing power from a fixed millage rate, assessed values in 1985 dollars are also shown.

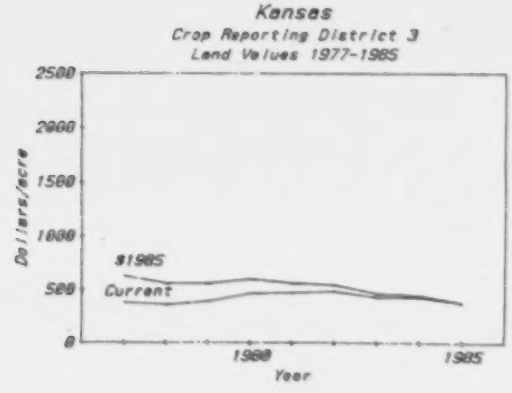
From 1981 to 1985, agricultural assessed values in current dollars remained relatively constant in most states. Only in Minnesota did assessed values increase as property values increase, then decline as agricultural land values fell. The relative stability of agricultural assessed values during this time of volatile land prices is due to the methods used to establish a value for agricultural property. In all states surveyed except Minnesota and Kansas, agricultural assessed values are based on a measure of the land's productive capacity, not on market prices. In Missouri and Arkansas the soil productivity grade determines assessed values. In Iowa, Nebraska, and North Dakota estimated net income as well as soil productivity is taken into account. Further details of assessment procedures in the states surveyed are given in figure 7.

These special provisions for valuing agricultural lands prevented a run up in assessed values during the last part of the boom in agricultural land prices. They also have, to this point, prevented a decline in the agricultural portion of the local property tax base. Only in Minnesota, where actual market values

FIGURE 4:


Arkansas
Crop Reporting District 6
Land Values 1977-1985
2500
2000
1500
1000
500
0
Dollars/acre
$1985
Current
1980
1985
Year


Iowa
Crop Reporting District 1
Land Values 1977-1985
4000
3200
2400
1600
800
0
Dollars/acre
$1985
Current
1980
1985
Year


Kansas
Crop Reporting District 3
Land Values 1977-1985
2500
2000
1500
1000
500
0
Dollars/acre
$1985
Current
1980
1985
Year

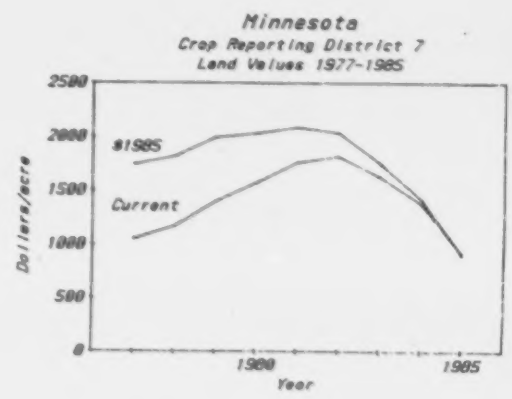
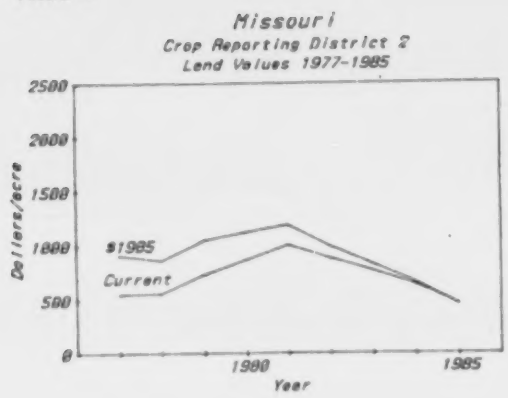
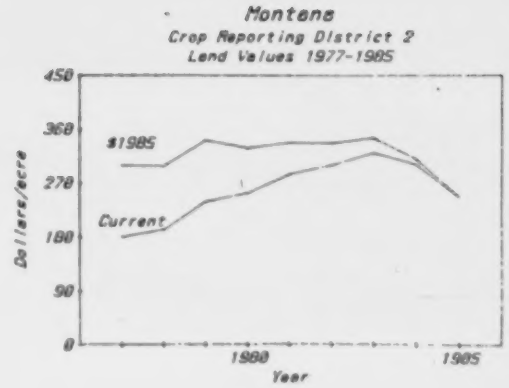
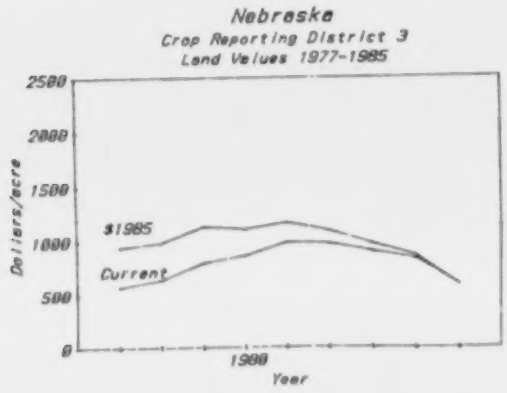

Minnesota
Crop Reporting District 7
Land Values 1977-1985
2500
2000
1500
1000
500
0
Dollars/acre
$1985
Current
1980
1985
Year

FIGURE 4:


Missouri
Crop Reporting District 2
Land Values 1977-1985
2500
2000
1500
1000
500
0
Dollars/acre
$1985
Current
1980
1985
Year


Montana
Crop Reporting District 2
Land Values 1977-1985
450
360
270
180
90
0
Dollars/acre
$1985
Current
1980
1985
Year


Nebraska
Crop Reporting District 3
Land Values 1977-1985
2500
2000
1500
1000
500
0
Dollars/acre
$1985
Current
1980
Year

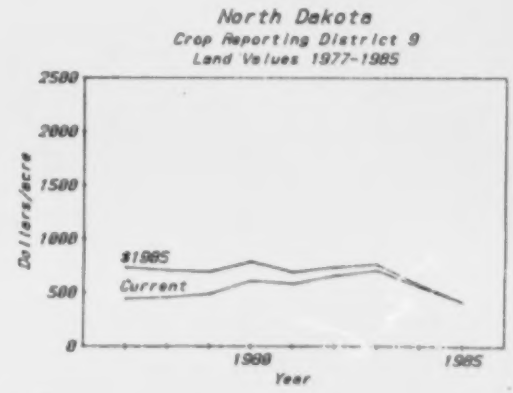

North Dakota
Crop Reporting District 9
Land Values 1977-1985
2500
2000
1500
1000
500
0
Dollars/acre
$1985
Current
1980
1985
Year

FIGURE 5: TAXABLE VALUE OF AGRICULTURAL LAND AS A PERCENTAGE OF TOTAL TAXABLE, VALUATION, SELECTED CROP REPORTING DISTRICTS, 1985.

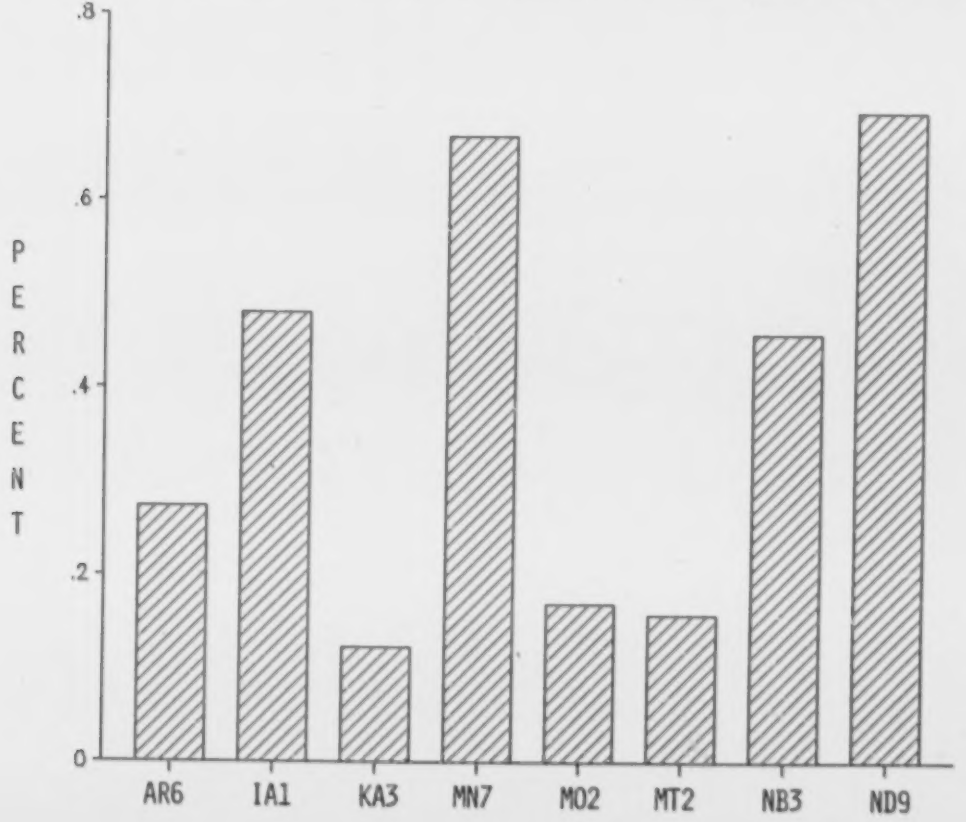
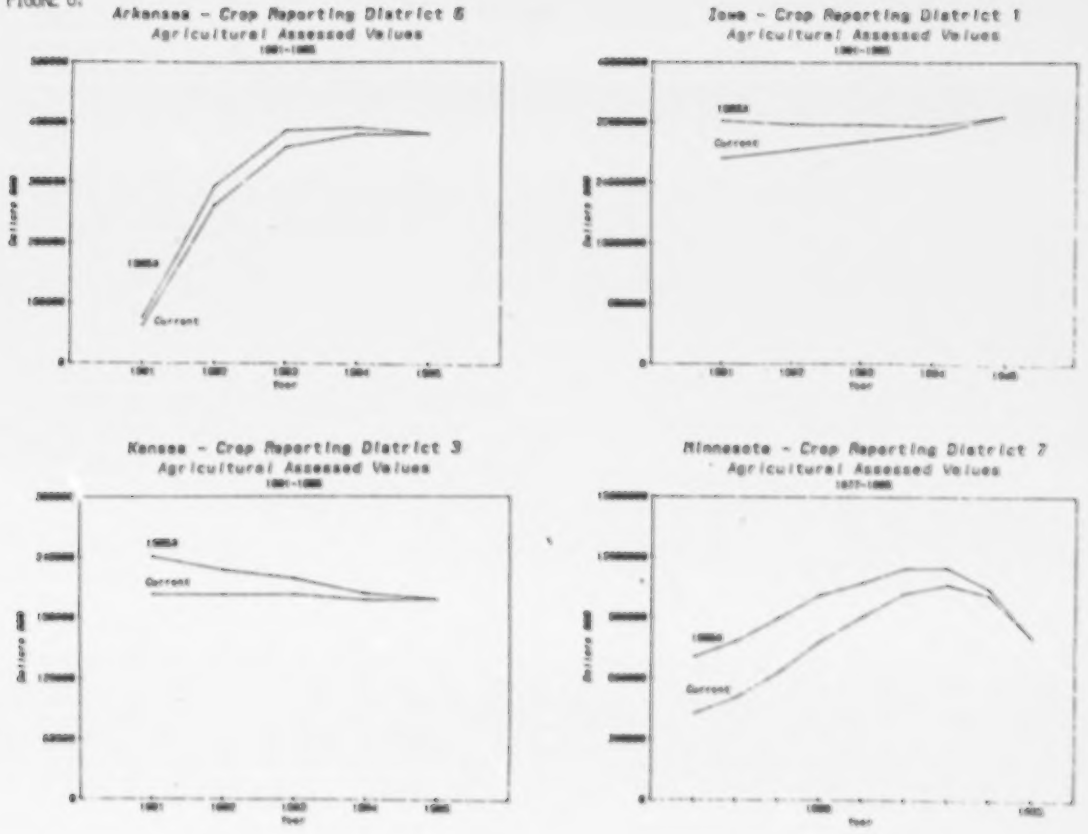


FIGURE 6:


Arkansas - Crop Reporting District 6
Agricultural Assessed Values
Current
Iowa - Crop Reporting District 1
Agricultural Assessed Values
Current
Kansas - Crop Reporting District 3
Agricultural Assessed Values
Current
Minnesota - Crop Reporting District 7
Agricultural Assessed Values
Current

are the basis for assessments, has there been a significant drop in assessed values.

One should not expect that agricultural assessed values will continue to hold at the same level though. Future soil productivity tables will almost certainly be revised downward to reflect the lower earning power of farm land. And, as lower net farm incomes are factored into state assessment formulas based on a combination of soil productivity and expected farm income, agricultural assessed values will fall. The current restructuring of agriculture will cause a drop in agricultural assessed values, and Minnesota, where market values determine assessed values, will not be alone in seeing substantial declines in the value of its agricultural tax base.

The importance of thinking in terms of real, constant buying power dollars, rather than current value dollars is apparent when the trend in agricultural values in 1985 dollars is examined. (figure 8) Even though assessed values did not decline from 1981to 1985 in most regions, the buying power of the funds raised through levying a constant millage rate shrank approximately 20 percent, since agricultural assessments did not keep pace withthe inflation in the rest of the economy. As a result, upward pressure on millage rates exists even now in many rural communities.

Downtown Property Values

When farm incomes decline, main street spending falls. Jobs in the local commercial sector disappear, and incomes in that sector decline as well. Downtown property values reflect the net

income which can be earned from that property, so over time the commercial property segment of the local property tax base also will decline. And, as with agricultural property, these declines will not occur instantaneously. Instead, they occur gradually over a number of years as some businesses close and others relocate.

The impact of declining farm incomes on the main street business community was estimated using data from Minnesota's CRD7 located in the southwestern Minnesota. A simple econometric model was constructed which estimates changes in local income, employment and property values associated with changing farm incomes.

A complete description of the model and its results is given in Appendix B. Some specific findings are summarized below.

--A $1000 change in net farm income produces $190 change in the net income of the region's merchants. This is substantially less than the impact from a similar sized increase in manufacturing incomes or transfer payments.

--Main street employment also depends on the income of the region's agricultural sector. A long term increase or decrease of $64,000 in net farm income will add to, or cutback local commercial employment by one job. Again, the multiplier for agricultural income is less than that for manufacturing or transfer payments. It is important to note, however, that the job estimates are the total of full and part-time jobs, not solely full time equivalent positions.

--Downtown property values decrease by approximately $15 for each permanent $1000 decrease in agricultural incomes. The adjustment process is slow, however, taking more than 5 years to complete after the change in income is recognized as permanent.

--Impacts of the recent decline in farm incomes depend on the year chosen as the baseline. If one chooses the historically high income years of 1974-1977 as the baseline, and assumes that the level of permanent income observed in 1983 will continue in the future, then, other

things equal, the decline in farm income has caused a decline of $47 million in off-farm income, and there are 3650 or about 15 percent fewer commercial sector jobs. Downtown property values will eventually decrease by about $3.1 million.

--When a period with lower levels of agricultural incomes is used as the baseline, impacts on jobs, employment, and property values are smaller. If farm income had held at 1979-1981 levels, other things equal, local incomes would be $22 million greater and today the local commercial sector would employ 1735 more full and part-time workers. In addition, the ultimate decrease in downtown property values would be about $1.5 million less.

--These estimates are specific to Southwest Minnesota and do not take into account impacts which might occur outside the region's boundaries in trading centers such as Mankato, Minnesota; Sioux Falls, South Dakota, or Minneapolis-St. Paul. If impacts in those cities were counted, multipliers would have been larger. The estimated impacts are expected to be typical of those which would occur in other agriculturally dependent regions in the upper midwest not containing a major trade center.

--There are several reasons for caution in using these estimates. They are based on a relatively short time period dominated by increasing agricultural incomes. If the local commercial sector does not respond symetrically to increases and decreases in local income, impact estimates will be either over or underestimated. In addition, local firms are unlikely to shutdown after only one bad year. Instead it will take the perception of continued, long term losses to produce a shutdown decision. Small town businessmen may not have shifted to long run thinking prior to passage of the 1985 farm bill. Now, with better information about future levels of farm income, shutdowns may accelerate.

Delinquency Rates

Property tax delinquency rates vary from state to state, and even within states. Delinquencies depend on the penalties and interest charges assigned, the market interest rate, local customs, and the health and makeup of the local economy. In some areas six percent or more of the total net levy might be expected to be unpaid a year after property tax collections were scheduled

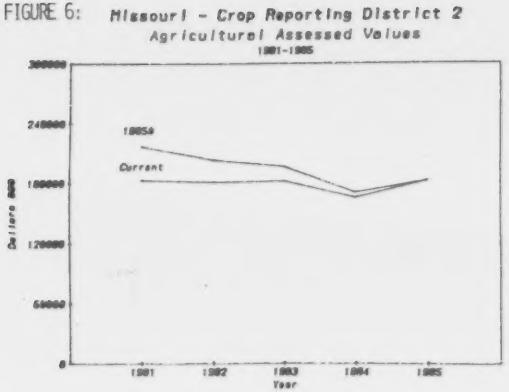
to be completed. Elsewhere, one percent or less might remain outstanding and be declared delinquent. Local officials take expected delinquency rates into account in their planning and delinquencies cause little financial stress, no matter what their level, as long as they are a relatively stable percentage of the tax levy.

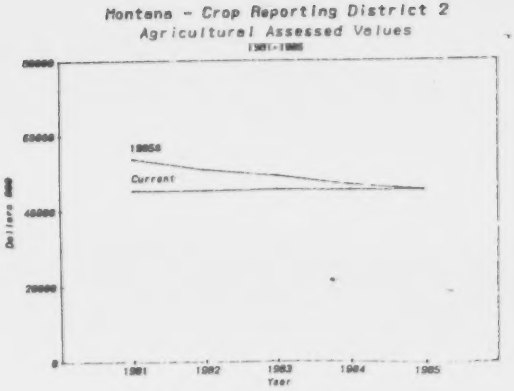
Sudden increases in delinquency rates are warnings that something is wrong with the system. It may be simply that market interest rates have increased to a level at which it is profitable to use unpaid property taxes as a source of capital, paying interest and penalities to the local government instead of a bank. Or, it may be symptomatic of fundamental problems with taxpayer's farm, or business, or in the local economy. For those already in financial difficulty, property taxes become just another bill that cannot be paid. Wide spread increases in delinquencies, especially on farm property, may indicate that assessed values are too high and that assets need to be revalued to reflect their current value, not their value in the past.

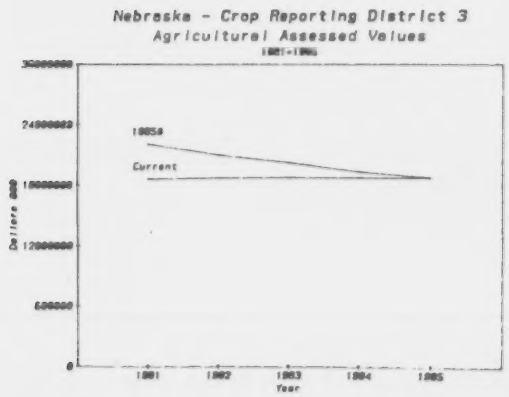
Property tax delinquencies increased substantially in dollar terms between 1980 and 1985, in agriculturally dependent counties. (Appendix Tables 4 a-h) In the Nebraska counties studied, delinquent taxes increased seven fold, growing from a total of less than $.75 million in 1980 to more than $5.5 million in 1985. (figure 9) Delinquencies in Iowa, Kansas, Minnesota, and Montana also more than doubled.

When viewed as a .percentage of total collections, delinquencies also increased substantially. (figure 10) Nebraska

FIGURE 6:


Missouri - Crop Reporting District 2
Agricultural Assessed Values
1981-1985
1985A
Current
Dollars
Year
1981
1982
1983
1984
1985


Montana - Crop Reporting District 2
Agricultural Assessed Values
1985A
Current
Dollars
Year
1981
1982
1983
1984
1985


Nebraska - Crop Reporting District 3
Agricultural Assessed Values
1985A
Current
Dollars
Year
1981
1982
1983
1984
1985

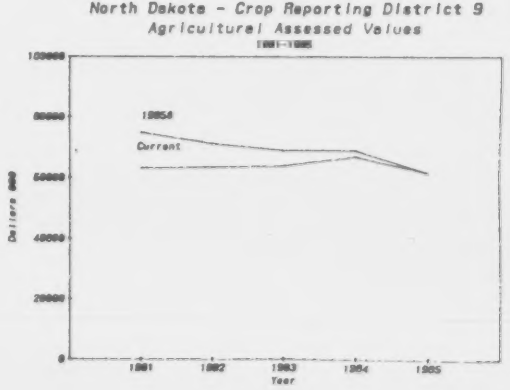

North Dakota - Crop Reporting District 9
Agricultural Assessed Values
1985A
Current
Dollars
Year
1981
1982
1983
1984
1985

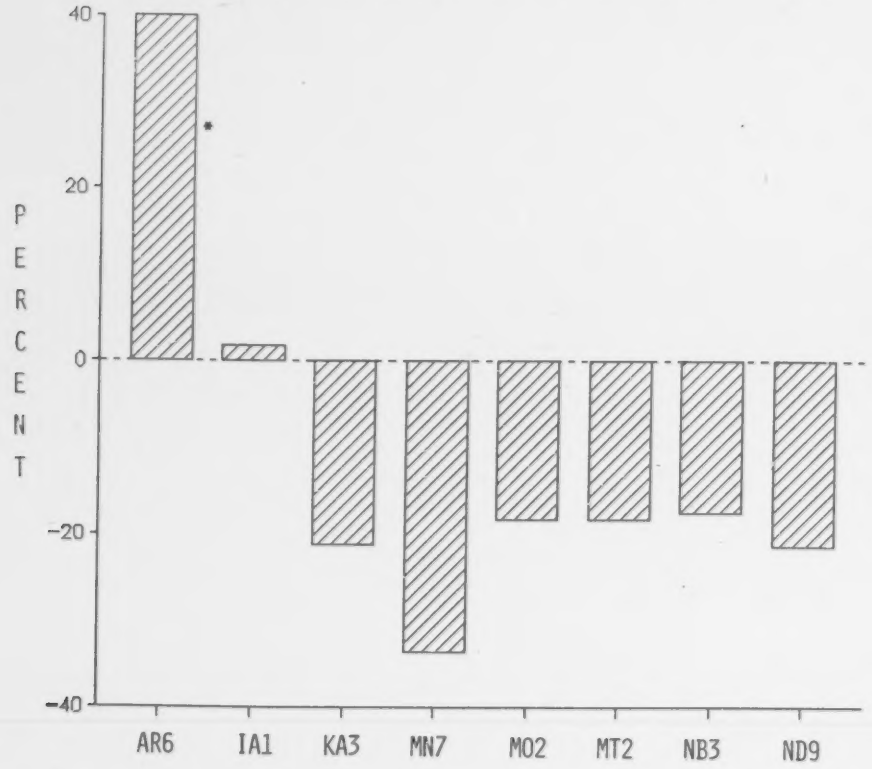
FIGURE 7: Assessment Procedures for Agricultural Land, Selected States, 1986.

	BASIS	FORMULA VARIABLE	CAPITALIZATION RATE	TAXABLE VALUATION
Arkansas	Soil Productivity/Use	12-yr. (high & low yr. discarded) moving	10%	20%
Iowa	Productivity	net income determined by 5-yr. moving avg. of production, prices, & expenses	7%	100% multiplied by a rollback percentage
Kansas	Mkt. Value		N/A	30% (2)
Minnesota	Mkt. Value		N/A	
Missouri	Productivity			12%
Montana (1)	Productivity	estimated from 1959 market data	Unchanged from original	30%
Nebraska	Productivity	net income determined by 5-yr. moving avg. of price & yield less experience factors.	11% for 1986	100%
North Dakota	Productivity	30% of 6 yr. moving avg. (high & low yr. discarded) of gross income.	12 yr. moving avg. (with high & low year discarded) of gross income.	Assessed value is 50% of true and full value. Taxable value is 10% of assessed value.

(1) Values have not changed since 1963. As future reappraisals warrant higher valuations, the percentage applied to determine taxable value will be lowered to keep values constant.

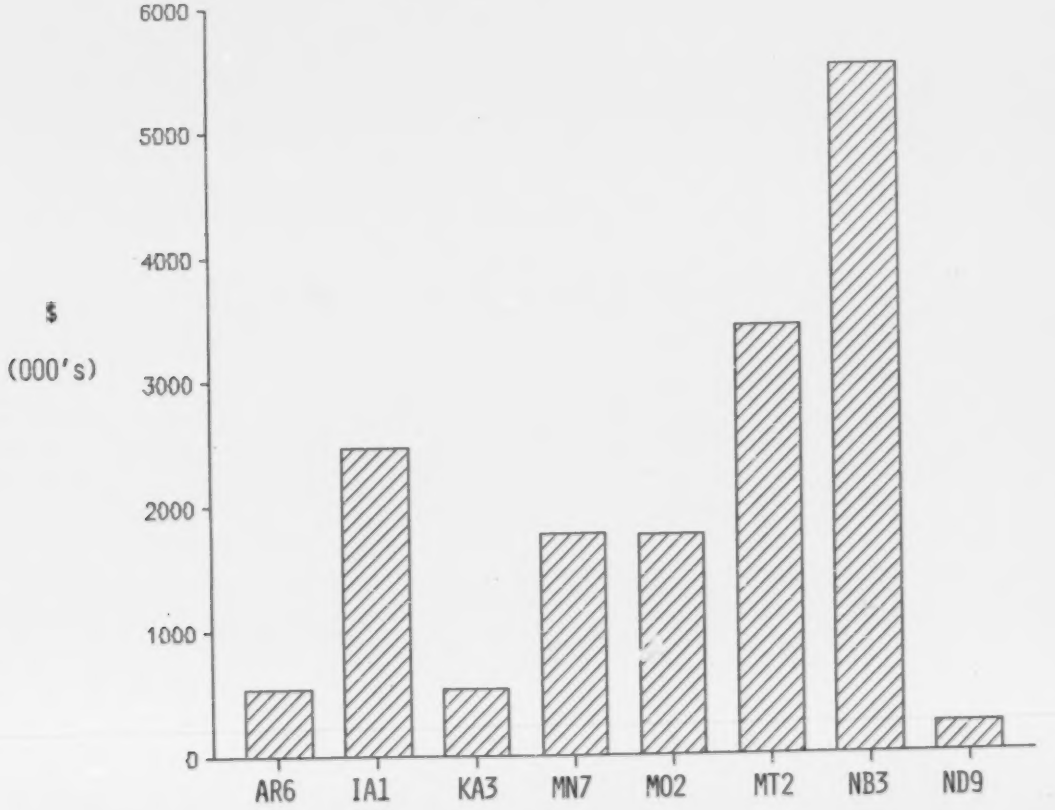
(2) Current valuations actually are about 8% of Mkt. value.

FIGURE 8: PERCENT CHANGE IN REAL ASSESSED VALUES OF AGRICULTURAL LAND, 1981-1985, SELECTED CROP REPORTING DISTRICTS



*STATEWIDE REASSESSMENT 1982-83.

FIGURE 9: DOLLAR VALUE OF PROPERTY TAXES DECLARED DELIQUENT IN 1985, SELECTED CROP REPORTING DISTRICTS



A SMALL TOWN FEELS THE FARM CRISIS

Fulda, a town of 1300 in southwest Minnesota, underscores how the effects of the farm crisis have spread beyond farm fields to small towns across the Midwest. Outside the city limits, the story is a familiar one: farmland values in surrounding counties have declined by more than 50 percent since 1979, the county's population is down, and property tax delinquencies are skyrocketing.

In Fulda, these agricultural problems have affected local business sales and employment, real estate values, property tax rates, and service demands.

*retail sales declined 55 percent between 1979 and 1984, falling from 7.5 million to 3.4 million;

*six businesses closed in 1985 alone, eliminating 21 jobs;

*a local bank failed;

*five homes were foreclosed in 1985;

*city lots declined in market value from $10,000 in 1979 to $3,500 today;

*from 1984 to 1985, property tax delinquencies more than doubled, rising from $6,700 to $14,905;

*city revenues declined 9 percent between 1982 and 1984 (falling from $463,178 to $421,953);

*an $80,000 rise in local government expenses during the same period required an 8 percent increase in local taxes last year and a projected increase of 15 percent next year, along with an automatic increase in state school foundation grants; and

*free and reduced price school lunches rose 35 percent.

showed the largest increase. Between 1981 and 1985 the percent delinquent grew by 378 percent rising from 1.75 to 9.5 percent. Minnesota, Iowa, and Montana again showed increases of over 100 percent.

Property Taxes as a Percentage of Total Revenues

The impacts of declining agricultural property values and lower downtown property values on the ability of local government to finance essential services will depend on the proportion of local revenues coming from the property tax. Differences in local government's reliance on the property tax in the crop reporting districts studied are shown in figure 11.

Property taxes are more than 40 percent of local revenues in Montana, Kansas, and Nebraska, and less than 20 percent in Arkansas and Missouri. As a general rule when property taxes are a smaller percentage of total revenues, State aids are larger. Charges and miscellaneous revenues and federal aid (including revenue sharing) were relatively constant in all of the sample crop reporting districts.

These results help to further identify those regions where declining farm land values are likely to produce the most stress for local governments. Clearly, Nebraska communities are at substantial risk since agricultural values make up a sizeable portion of the local property tax base and more than 40 percent of 1982's local government revenues came from the property tax. The Montana and Kansas crop reporting districts surveyed are less exposed to stress from declines in agricultural values because proceeds from the region's oil and gas wells are part of the

local tax base. But, declining oil and gas prices may produce a similar reduction in the property tax base.

In States such as Minnesota, Iowa and North Dakota, where property taxes provide between one-third and one-fifth of local revenues, the outlook, while not as strained as in Nebraska, is certainly not optimistic. Agricultural values remain a major component of the local property tax base, and further declines will force millage rate changes if localities are to maintain existing service levels.

OTHER SOURCES OF LOCAL GOVERNMENT REVENUE

During the past two decades, all local governments have become less reliant on property taxes. Now, the property tax is no longer the largest source of local revenue either nationally or in agriculturally dependent counties. Unlike the early 1960's when almost half of all local revenues (48 percent) came from property taxes, today's rural communities receive more from state aid (37 percent) than from property taxes (27 percent). Federal aid (6 percent), charges and miscellaneous revenue (25 percent) and other taxes (4 percent), provide the rest.

Agriculturally dependent counties and metropolitan areas did not differ in the average proportion of local revenues obtained from property taxes. But, that relationship varies from state to state, and even community to community depending on state aid formulas and who has responsibility for providing services such as welfare and highways.

Once, fiscally strapped local governments could turn to the states and to the federal government for assistance during hard times. In the late 1960's, for example, the difficulties of the inner cities were eased by special federal and state programs targeting aid toward the affected communities. In this way, funds from suburban and rural taxpayers were directed into problem areas of the central cities. Today's conditions are different and rural areas are unlikely to benefit from increases in federal and state aid. Instead, independent federal and state actions, unrelated to the farm problems, could add to the financial problems of rural local governments.

Federal Aid

In 1982 federal aid, including general revenue sharing, totalled less than 10 percent of revenues for local governments in the crop reporting districts studied. (figure 12) Some individual units of government, townships for example, received a greater proportion of their revenues from federal aid, but variation across states and among types of governments was substantial.

Federal aid is only a small part of the local revenue base. But, federal changes unrelated to the farm problem can add to the financial stress on rural local government. Between 1980 and 1985 federal aid to state and local governments fell by 25 percent in constant dollars, and rural communities have not been spared their share of those cuts. Further, the need to meet Gramm-Rudman deficit targets is expected to force additional cuts in the aid programs available to localities. The National Association of State Budget Officers estimates additional cuts of 20 percent in state-local aids will be required by 1990. Revenue sharing, the major source of federal aid for many nonmetro localities, is also scheduled for elimination. Rural communities cannot expect real increases in federal aid under existing programs. More realistically, they should expect further declines.

State Aid

States also may be unable to provide additional aid. The decline in farm income is cutting state revenues as well,

FIGURE 10: PERCENT CHANGE IN PROPERTY TAX DELINQUENCY RATE, SELECTED CROP REPORTING DISTRICTS, 1981-1985

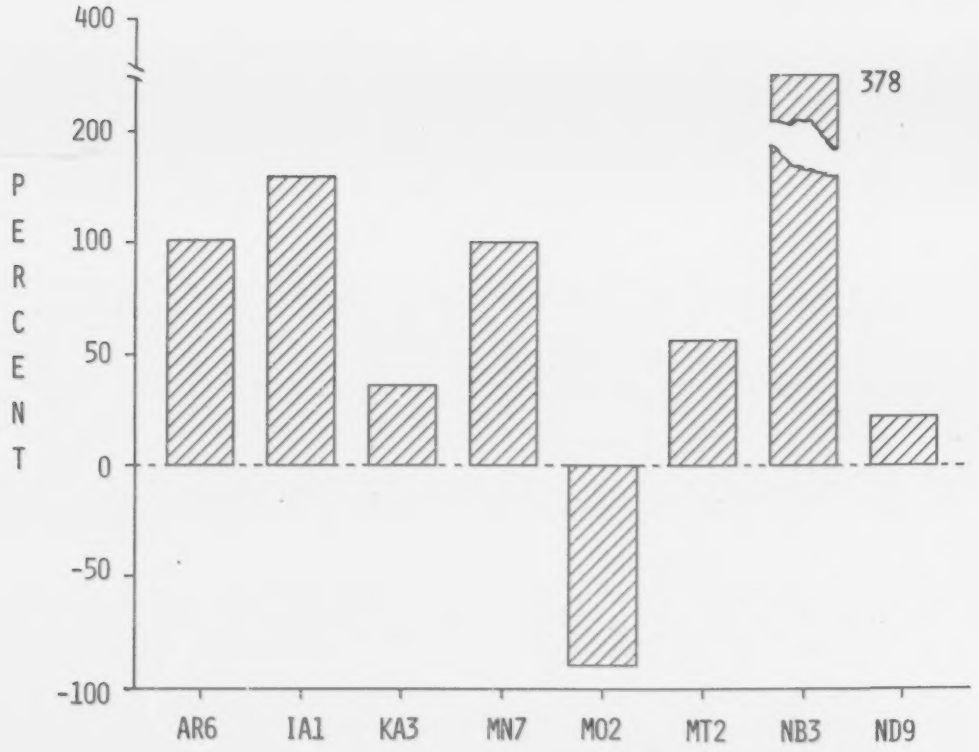
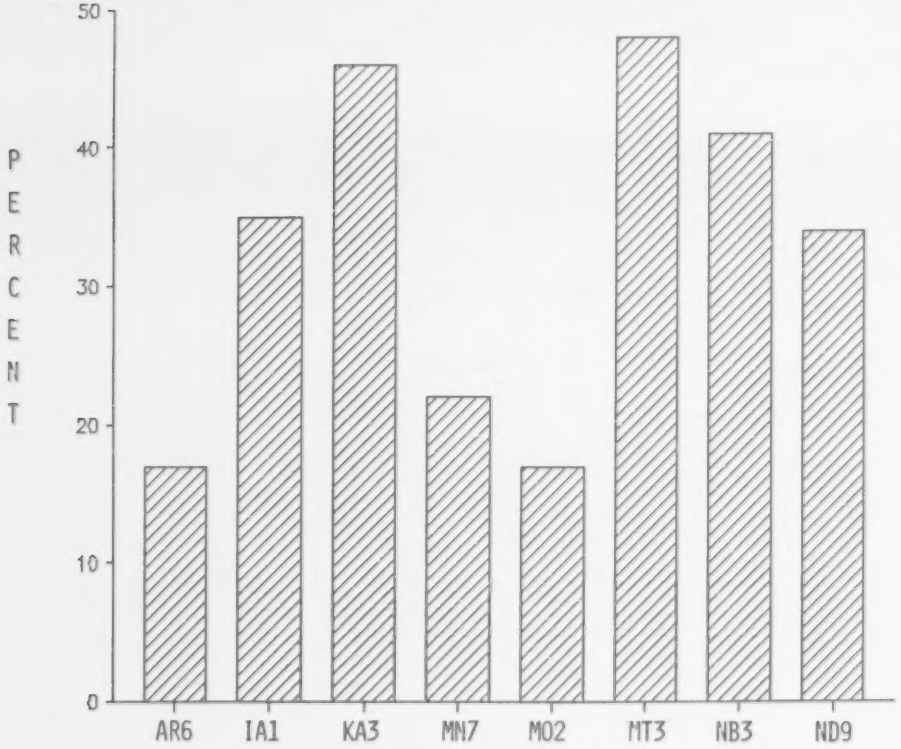
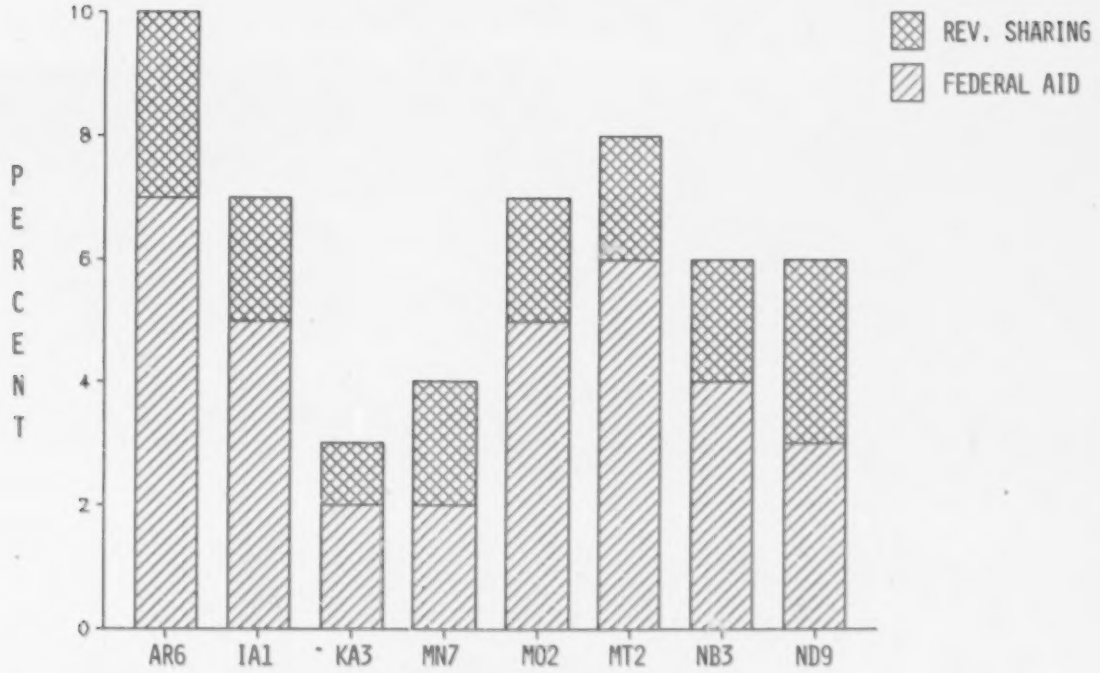


FIGURE 11: PROPERTY TAXES AS A PERCENTAGE OF LOCAL GOVERNMENT GENERAL REVENUES, SELECTED CROP REPORTING DISTRICTS, 1982.



SOURCE: 1982 CENSUS OF GOVERNMENTS.

FIGURE 12: FEDERAL AID AS A PERCENTAGE OF LOCAL GOVERNMENT GENERAL REVENUES, SELECTED CROP REPORTING DISTRICTS, 1982.



SOURCE: 1982 CENSUS OF GOVERNMENTS.

especially in states where local government's problems are most severe. Six of the eight states included in this study were among the 17 states to report mid-year budget reductions due to smaller than anticipated revenue collections. Six of the study states also have either enacted or proposed a decrease in state funding for local schools. Clearly it is unrealistic to expect that lost property tax revenues will be fully replaced by state aid.

Results from a recent survey of state revenue growth by the Advisory Commission on Intergovernmental Relations confirm the pessimistic short term view. Of the states in this study, only Nebraska and Missouri were expecting tax revenues to grow as fast as the national average. (figure 13) In Nebraska, the growth estimates assumed that the individual income tax rate would increase from 19 percent to 20 percent of the federal tax liability.

State aid already was the single largest source of revenue for rural local governments, with about 38 percent of non-metropolitan local governments' revenues coming from that source in 1982. State aids provided about 40 percent of local governments' revenues in the nation's 702 agriculturally dependent counties. In the crop reporting districts surveyed, dependency on state revenues ranged from less than 20 percent in Montana and Kansas, to more than 40 percent in Arkansas, Minnesota and North Dakota. (figure 14) Were states try to make up all lost property tax revenues, state aids would make up well over 50 percent of local revenues in some regions, raising

NORTH DAKOTA: A STATE UNDER FISCAL STRESS

Faced with both an agricultural recession and a rapid downturn in oil prices, North Dakota's budget has come under severe fiscal stress. In FY 1986, state revenues declined 19.5 percent, forcing mid-year cuts in the state's FT 1986 budget.

Education has been especially hard hit. Per pupil grants of state aid to education have already been reduced 4 percent (from $1425 to $1370 per pupil), and the state education association anticipates that additional across-the-board cuts in the state budget will further reduce state education aid. As a result, total state aid to education has declined from 63 percent of total education costs per pupil to 44 percent today.

What does this mean in terms of education services? It means:

*cuts and eliminations of home economics, vocational education, and elective courses;

*predicted teacher layoffs of 400-500 teachers statewide;

*a decline of 55 percent in North Dakota's ranking in paying teachers' salaries, from 29th in 1981 to an estimated 45th in 1986.

important questions about local control and the independence of local government.

States may still opt to provide additional funds to rural localities, but they should not be misled. The current drop in rural land values is not a temporary, short-term change which can be expected to quickly reverse itself. Instead, it is the result of a massive write down of the assets employed in agriculture. In the absence of major shocks to the world's food production system, or a large change in demand for U.S. agricultural products, agricultural land values are unlikely to recover to the real values of the late 1970's. This means that state assistance, if it is offered, must be considered a long term commitment to rural areas and not simply a temporary measure.

LOCAL GOVERNMENT EXPENDITURES

By themselves today's farm problems will not bring financial stress to all rural local governments. Even if only agriculturally dependent communities are considered, there will be substantial differences in the impact of the farm crisis on local public services. The proportion of local revenues which comes from the property tax and the ratio of agricultural property value to total assessed value vary widely both among and within states.

Still, the possibility of having to choose between lower service levels and higher taxes is a real concern throughout rural America. Northeastern Nebraska, where nearly one-half of all local revenues come from the property tax and where farm land is 45 percent of the local property tax base is a clear example of a region where declining farm land values could create sizeable reductions in future local government revenues. Even localities in the Kansas and Montana crop reporting districts studied may face stress when declining energy prices cause oil and gas property values to fall, reinforcing the trend created by declining agricultural land values.

This section provides needed background for a more detailed examination of the likely impact of declining agricultural tax base on local government revenues. It begins with a brief description of problems with using expenditures as a measure of local government service levels. Existing (1982) spending levels in the study counties are then examined to see whether agriculturally dependent regions are providing higher levels of

government services than are available elsewhere in the nation, and whether rural service levels increased during the prosperous years of the 1970's relative to the services offered elsewhere. Finally, the types of government most likely to be adversely affected are identified.

Expenditures as a Measure of Service Quality

Physical measures of the quantity and quality of services provided by local government are not widely available. Consequently, analysts are forced to use per capita expenditures, or per pupil expenditures as a proxy for government service quality. Such an approach assumes that if a locality spends $1 more per capita than its neighbors, its residents receive either more or higher quality services, an assumption which does not always hold. Differences in production costs can make comparisons of expenditures among communities misleading.

Size economies and differences in service conditions are the major sources of differences between actual service levels and per capita expenditures. Economies of size--that per unit costs of services decrease as the population of the community increases--are well known and accepted as an important source of differences in per capita local government expenditures. (Fox)

Service conditions are equally important, but they are often overlooked. Their contribution can best be explained by noting that local residents demand results, not fixed dollar amounts of spending. For example, for police protection what local residents are willing to pay for is a reduction in the probability that members of their household will be affected by

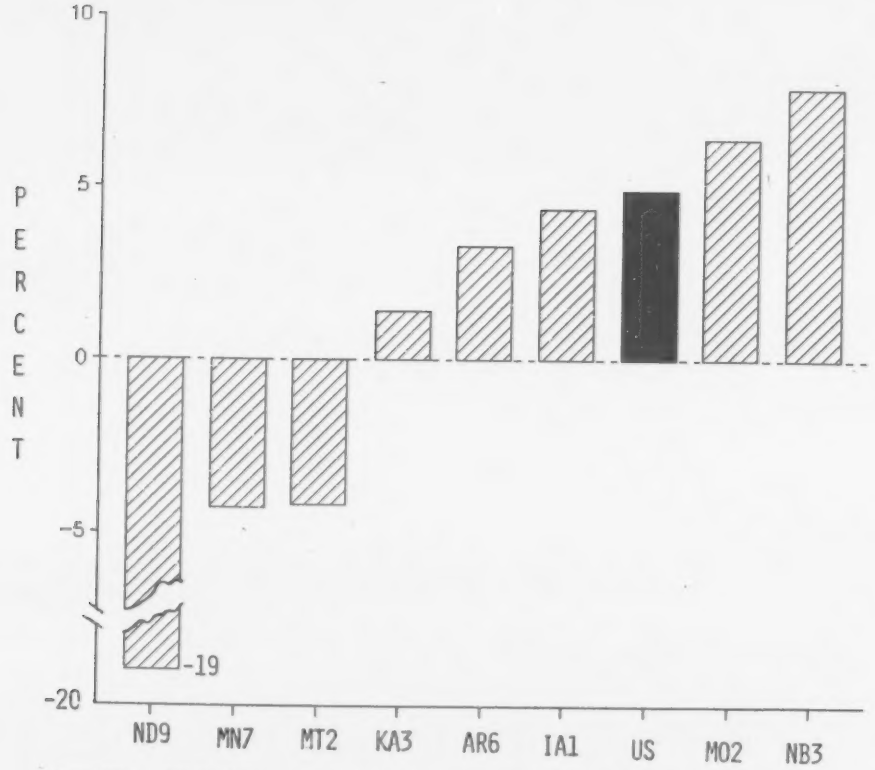
crime. They are unconcerned about the number of man hours of patrols required to provide a particular level of safety, and in theory are willing to pay the same amount whether it takes one patrol per week or one patrol per hour. As a result, localities spending $5 per capita and those spending $50 per capita could be receiving identical levels of services with the difference being a lower underlying risk of crime where expenditures were lower.

These and other problems with local spending data restrict interpretation of inter community differences in local government expenditures. (Stinson, 1981) They do not completely invalidate such comparisons, however. While it is impossible to say that a community spending $10 per capita more than its neighbors is offering higher quality services, a 10 percent cut in expenditures will lower service levels in any community. Further, communities where expenditures have not increased as rapidly as national averages are unlikely to be increasing their service levels relative to those elsewhere in the nation.

Local Expenditures

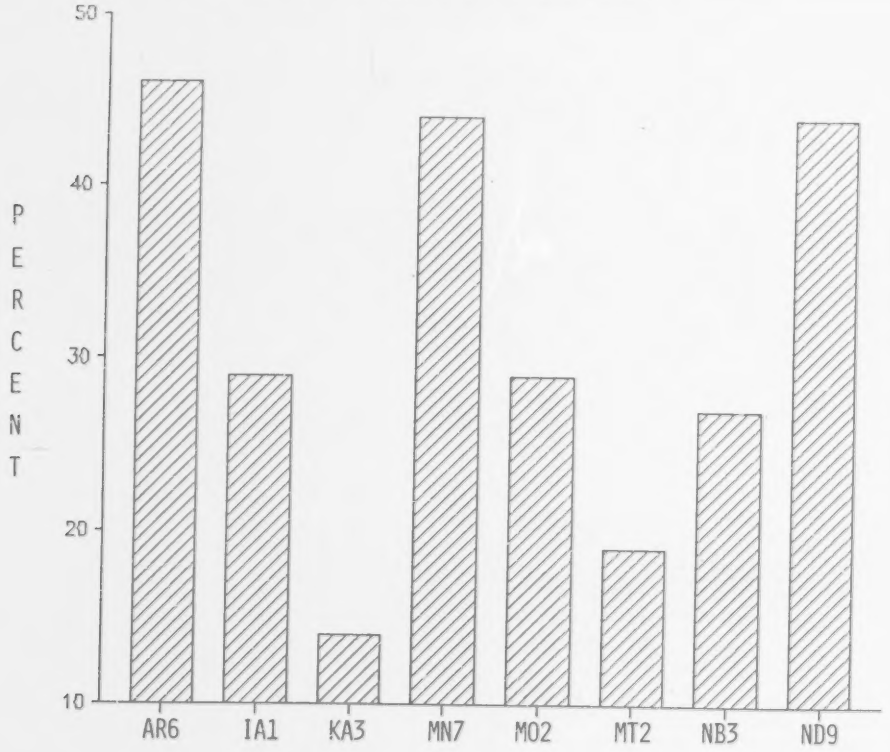
In 1982 per capita local government expenditures were less than the national average in 5 of the 8 crop reporting districts studied. (figure 15) Localities in the Arkansas and Missouri counties studied spent at approximately two-thirds the national average, while those in the Kansas, Minnesota, and Montana counties spent at least 25 percent above the national rate. In Iowa, spending was a smaller percentage of the U.S. average in 1982 than in 1972. In Kansas, Minnesota, and Montana per capita spending as a percentage of the national average grew

FIGURE 13: ESTIMATED CHANGES IN STATE GOVERNMENT REVENUES, 1985-1986.



SOURCE: ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS.

FIGURE 14: STATE AID AS A PERCENTAGE OF LOCAL GOVERNMENT GENERAL REVENUES, SELECTED CROP REPORTING DISTRICTS, 1982.



SOURCE: 1982 CENSUS OF GOVERNMENTS.

substantially, perhaps reflecting the growth in the local property tax base due to increasing oil prices (in Kansas and Montana) and Minnesota's higher farm land values. Expenditures by the other local governments studied also grew, in real dollars as well as current dollars, but their growth rates were similar to those observed in communities throughout the nation.

When spending for local education is examined separately, schools in Kansas and Montana again were found to spend at levels substantially above the national average, while those in Iowa, Minnesota, Nebraska and North Dakota spent at approximately the national level. (fig. 16) Between 1972 and 1982 per pupil expenditures grew more rapidly than the national average in all but the Iowa, Minnesota and Missouri crop reporting districts studied. Again, while spending grew at the same time farm land values increased, local government spending also was increasing elsewhere.

These results provide little support for the hypothesis that counties where government service levels are most at risk due to falling land values were offering higher quality public services than were available in other communities. Nor do the data suggest that rural localities used the increase in land values during the 1970's to support higher service levels than they had provided historically.

Per capita spending for all locally provided services was 80 percent or less of the U.S. average in 5 of the 8 crop reporting districts examined. Of the three spending more than the U.S. average, Kansas and Montana both spent largely for local

education, possibly because higher costs attributable to a lack of size economies and the low population density of the region. Only in Minnesota, where expenditures were slightly more than 25 percent above the national norm and state aids were a large proportion of local revenues, was there reason to suspect that rural service levels were above the national average. Even there, per pupil educational expenditures had dropped to only 3 percent above the national average between 1972 and 1982.

Impacts, by Type of Government

School districts and county governments are likely to be the levels of government most seriously affected by the declining property tax base. Since most farms are located outside city boundaries and thus not subject to city taxes, the major impact on city revenues will be through the accompanying decline in commercial market values. In the crop reporting districts studied, approximately two-thirds of farm property taxes went to fund the local educational system, about 30 percent for county services, and the remainder to townships and other special districts. While there was variation across states, differences typically were not large.

Existing state aid programs should help take up some of the shock to local educational systems. Depending on the nature of the State's school foundation aid program, state government may well cushion the shock of lower property tax revenue caused by declines in assessed values.

By guaranteeing that a specific dollar amount of revenue will be available for local services, state school foundation

programs relieve some of the local fiscal stress caused by declining farm incomes and lower land values.1 The relief will be very selective, however, depending on the characteristics of the State's foundation aid program. Table 1 gives an indication of the importance of the foundation aid program and State aid levels in general to local school districts, by showing the percentage of school district revenues coming from state aids. School districts in all of the study states except Missouri and Nebraska received at least 40 percent of their revenues from their revenues from state government.

Table 1: State Aid as a Percentage of Revenues for Local Education, Selected States

	1977	1982	1984	1985	1986
	Percent				
Arkansas	50.4	52.5	57.6	60.8	61.3
Iowa	39.5	42.5	42.5	40.7	40.7
Kansas	43.2	44.9	42.6	44.0	44.6
Minnesota	58.0	64.2	53.8	55.0	54.4
Missouri	34.6	38.9	36.3	36.5	38.9
Montana	51.3	44.5	51.7	51.7	51.7
Nebraska	18.1	29.9	29.3	28.1	28.1
N. Dakota	47.9	58.1	53.5	53.4	53.5

Source: Estimates of School Statistics, NEA. 1986 Estimates from Telephone Conversations with NEA.

1Minnesota's school foundation program, a relatively generous one, provides an example of how the state cushions local impacts. In 1986, school districts are guaranteed roughly $1700 per weighted pupil unit. Each district must levy a 23.5 mill property tax for operations and the State will make up any differences between the amount levied and the $1700 per pupil guarantee. If the district's assessed valuation is $50,000 per pupil, the 23.5 mill tax produces $1175 per pupil and the State contributes $525 ($1700 - 1175). If local assessed values drop by 50 percednt to $25,000 per pupil, the State contribution would automatically increase to $112.50 per pupil ($1700 - 587.50).

A LOCAL SCHOOL DISTRICT GRAPPLES WITH FARM CRISIS

What does the farm crisis mean for local education? For 840 students in one rural Minnesota district, it means budget cuts, teacher layoffs, and service reductions.

Independent School District #417 is a rural district in Southwest Minnesota, covering parts of Redwood, Lyon, and Murray counties. Between 1983 and 1984, taxable valuations in the district fell $1.1 million, which contributed to a decline of almost 10 percent in the school district budget. This budget shortfall:

*swallowed up the district's reserve fund;

*forced the layoff of seven teachers;

*required cuts in administrative, clerical and custodial staff;

*cut the sports budget by 50 percent and eliminated two sports entirely; and

*eliminated a school bus route.

School district officials fear the worst is yet to come. When the current assessment cycle is completed, taxable valuations are expected to decline another 15 percent, starting yet another round of difficult cuts.

This partial guarantee of local revenues has the potential to significantly reduce fiscal stress on the affected localities. But, it is important to note that foundation aid programs and other similar needs related programs will increase the fiscal stress on state governments, thus tieing state expenditures to shocks to the local property tax base.

For states with widely diversified economies, these programs offer a way of easing the financial stress on rural school systems. By raising additional funds from areas with a strong economic base through higher state sales and income taxes and then redistributing those funds to local governments in regions where the property tax base has declined, the need for local expenditure cuts will be lessened. But, such programs may not be acceptable to the public if they are seen as permanent transfers of income rather than temporary assistance.

If incomes in other sectors fall, as has happened in energy producing regions with the collapse in oil prices, statewide cutbacks in all services may be necessary to match expenditures with revenues. This will further worsen local governments' problems. Transfer programs also are of little real value in states whose economy is heavily dependent on agriculture. If low farm incomes drive down the local tax base by depressing farm land values, state revenues will also be lower than expected, leaving no capability for intervention without increasing existing state tax rates.

Service Demands

Rural states and localities are being challenged, by rising service demands as well as falling revenues. As the agricultural recession grows broader and deeper, more rural Americans are turning--often reluctantly--to government for help. Governments throughout the farm belt are attempting to respond with job training programs for farmers forced off their land, emergency suicide prevention programs, stress and financial counseling programs, and a range of additional social services.

Many of the increased service demands are a direct response to rising unemployment. Although unemployment rates across the great plains and the corn belt historically average well below the nation's, as of January 1986 the unemployment rate in the eight sample states averaged one-half point above the national average and the gap was growing. Although the national unemployment rate decreased by 5.5 percent during 1985, unemployment rose in five of the states studied. Strong employment gains were evident only in Missouri, and if that state is excluded, joblessness across the states examined was nearly 10 percent above the norm.

Each of the states examined has initiated job retraining and career counseling programs aimed at helping displaced farmers find alternative employment. For those still struggling to keep their farms, individual states and localities, along with the cooperative extension service, are initiating and expanding programs of legal and financial counseling.

Rising unemployment and financial stress are taking a toll on farmers, their families, and surrounding rural communities, and placing strains on rural social service and mental health facilities. In one regional mental health center in southwest Minnesota, outpatient services are up 30 percent since 1984. Calls to their 24 hour crisis hotline are up 430 percent, visits to the 24 hour crisis drop in center, up 329 percent; and drug, suicide prevention, and family abuse consultations up 67 percent. Similarly, northern Iowa experienced a 5 percent increase in mental health hospitalizations in 1985 (despite a 7 percent decline in population), and social service requests jumped 30 percent.

Many believe that service demands are outstripping the ability of government to respond. One study of suicide and depression in rural Minnesota found that 3 out of 100 adolescents surveyed had attempted suicide within the past month--15 times the national average--and rates of depression were twice the national norm. The average depression score for these youths on one pyschological test was greater than that for adolescents hospitalized at the UCLA Neuropsychiatric Institute. (Hoberman) Similarly high rates of serve depression were found among adults in a Missouri study. (Heffernan)

Governments have no easy answers to these problems. As revenues decline, spending on basic services, maintenance, and long term development will have to be cut and infrastructure projects deferred if more resources are to be devoted to emergency and employment services.

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FUTURE IMPACTS ON LOCAL GOVERNMENT SPENDING

This report has concentrated on identifying the impact that declining farm land values will have on rural local government's property tax base. The public policy concern, however, is not changes in the local tax base, but rather changes in local government's ability to provide the essential services--the schools, highways, police and social services needed by those living outside the metropolitan area.

This section reports simple projections of the per capita amount property taxes will have to increase (other things equal) to overcome reductions in the local property tax base. The impacts of cuts in federal and state aid, and general revenue sharing are also estimated based on data from the 1982 Census of Governments. The dollar amounts found should not be seen as estimates of the actual decline in spending which will occur in the absence of other revenue increases, but rather as a measure of the size of the deficit which local officials must overcome through a combination of reductions in services and higher taxes.

The projections which follow indicate that while the financial stress brought on by lower agricultural land values could probably be absorbed by local taxpayers, the combined impact of lower property tax receipts, and lower state and federal aid will place a severe financial constraint on rural local government's ability to provide essential services.

Local Property Taxes

The impact of expected declines in agricultural land values on local government revenues was examined by assuming cuts of 10 and 25 percent in local property tax receipts. Then, holding other sources of revenue constant, the level of per capita expenditure consistent with the reduction in property tax receipts was found. The difference between actual 1982 expenditures and those taking into account reduced property tax revenues is the deficit facing local officials. Again, this shortfall assumes no changes in the level of federal or state aid.

The cutback percentages assumed for the local property tax base, while arbitrary, provide realistic boundaries for the impacts of the decline in land values. A 25 percent decline is equivalent to a 50 percent drop in real land value in a region where agricultural land is 50 percent of the local tax base. Declines in the Minnesota's CRD 7, where agricultural land is more than 75 percent of the total tax base and where real assessed values have already fallen by 30 percent, are now approaching that level. The 10 percent decline (a 20 percent drop in real agricultural values when agriculture is 50 percent of the tax base) has been exceeded in several of the crop reporting districts studied.

The resulting deficits from 1982 spending levels for each of the study areas are reported in table 2 and shown in figure 17. As expected, given that property taxes provided less than half of

FIGURE 15: PER CAPITA OPERATING EXPENDITURES BY LOCAL GOVERNMENTS AS A PERCENT OF NATIONAL AVERAGE, SELECTED CROP REPORTING DISTRICTS, 1962, 1972, 1982

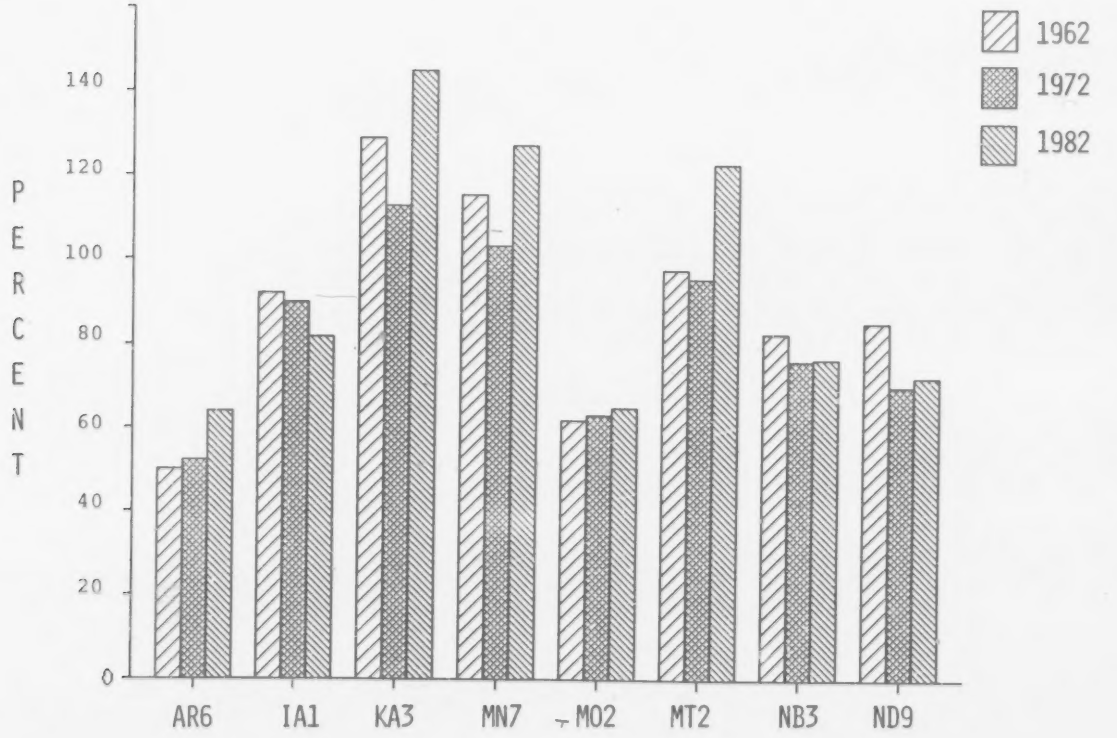
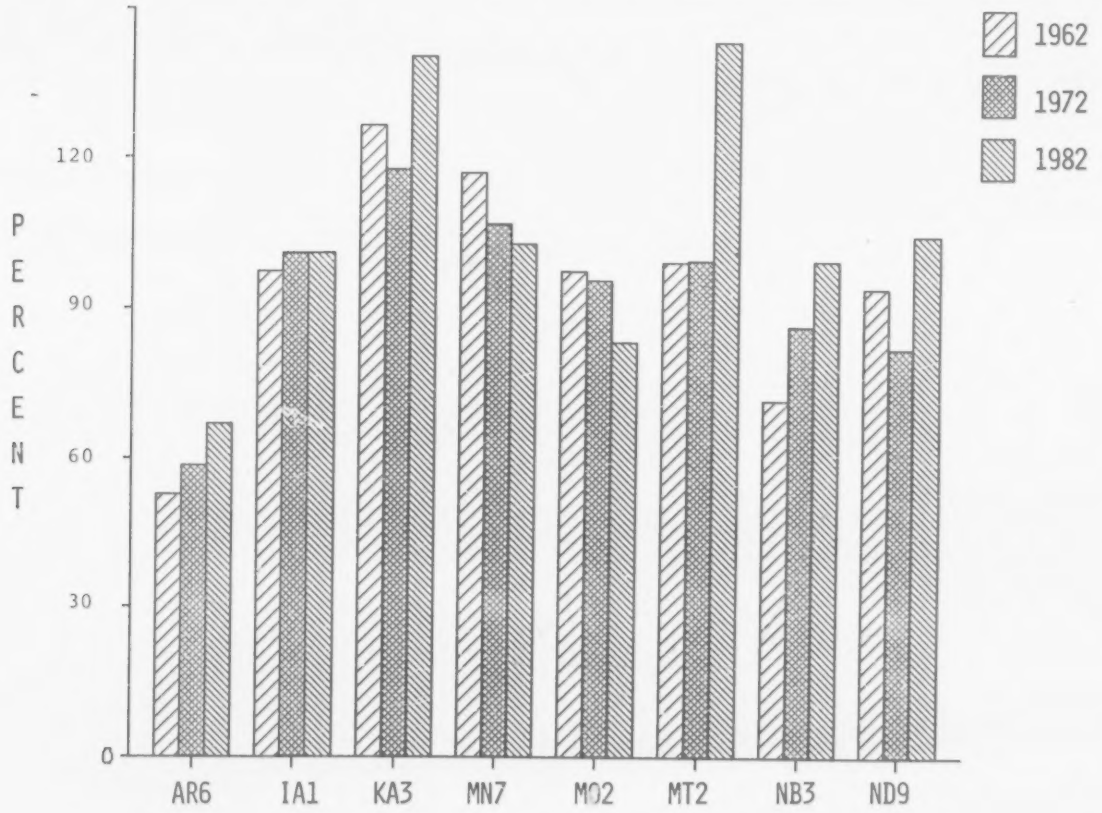


FIGURE 16: PER PUPIL EXPENDITURES ON EDUCATION, AS A PERCENT OF NATIONAL AVERAGE, SELECTED CROP REPORTING DISTRICTS, 1962, 1972, 1982



local revenue in the crop reporting districts studied, the percentage declines were not dramatic. A ten percent drop in property tax revenues, other things equal, produced cuts in per capita expenditures ranging between two and five percent. Localities which spent less than the national average before would spend even less after those cuts. Those above, remained above, but not by as large a margin as before.

Table 2: Local Revenue Impact of a 10 Percent Cut in Property Tax Receipts, Selected Crop Reporting Districts, 1982.

Crop Reporting District	Operating Expenses	Revenue Loss
	($/percapita)	
Arkansas 6	653	13
Iowa 1	839	45
Kansas 3	1487	80
Minnesota 7	1302	32
Missouri 2	664	20
Montana 2	1260	72
Nebraska 3	782	39
North Dakota 9	740	34

In dollar terms the local deficit from the 10 percent drop in property taxes ranged from $13 per capita in Arkansas to $79 per capita in Kansas. In four of the crop reporting districts studied--Iowa, Minnesota, Nebraska, and North Dakota--local governments would need additional revenues of from $30 to $45 per capita to hold services at 1982 levels. Under the more extreme assumption of a 25 percent cut in property tax receipts, the estimated shortfalls were two and one half times greater, ranging from $33 to $199 per capita.

On a per capita basis the revenues lost through reduced property taxes do not seem large compared to existing spending levels--even under the extreme assumption of a 25 percent drop in property tax collections. But, it is difficult to translate those dollars into actual losses of services. Cuts of that magnitude would move spending levels in the Iowa, Nebraska, and North Dakota study areas to 70 percent or less of national averages, joining localities in the Arkansas and Missouri counties studied at those relatively low spending levels.

The Additional Impact of Cuts in Intergovernmental Aids

Falling farm land values are not the most serious threat to local government revenues in all communities. In the Arkansas counties examined, eliminating federal revenue sharing would reduce local spending, other things equal, by more than a 10 per cent drop in property tax receipts. In four other states a ten percent cut in state aid would have a larger impact.

The combined impact of cuts in federal and state aid and the local property tax base under two alternative sets of assumptions is shown in figure 18. The low estimate is based on an assumed 10 percent drop in property taxes, a 50 percent cut in general revenue sharing, and a 20 percent cut in other federal aids from 1982 levels. The high estimate assumes a 25 percent drop in property tax receipts, elimination of general revenue sharing, a 50 percent cut in other federal aid and a 10 percent drop in state aid.

Again, these percentage cutbacks, while arbitrary provide realistic limits to the expected local government revenue losses.

Impacts are based on revenues and expenditures reported in 1982, and several states have been forced to institute cutbacks of 10 percent or more since that time due to lagging state economies. At the federal level general revenue sharing is scheduled for elimination at the end of the 1986 fiscal year, and Gramm-Rudman provisions are likely to force a further reduction in the real buying power of federal aid between now and 1990. In addition, since the data used are 1982, sizeable decreases in the real value of these aids have already been observed.

The combined impacts of all potential cuts indicate major financial problems for rural communities. In all but Arkansas and Missouri the deficit under the low impact scenario totals more than $50 per capita, or $200 for a family of four. Under the high impact scenario the projected deficits were at least $100 in all but Missouri ($98.80). In the sparsely populated regions of Montana and Kansas, the deficits were more than $250 per capita. The lesson is clear. Any reduction in revenues will cause problems for local government, but when likely cuts from several sources are combined rural localities will face major financial problems.

Projected per capita shortfalls, based on 1982 levels of expenditures and revenues are shown in Table 3 and figure 19 for a ten percent cut in local property tax revenue and state aid, a 50 percent drop in federal aid, and elimination of general revenue sharing. In this scenario, local property tax rates would need to increase enough to provide an average of $106 per capita, or $425 for a family of four, if cuts in services were to

FIGURE 17: LOSS OF LOCAL GOVERNMENT REVENUE DUE TO A 10 PERCENT CUT IN PROPERTY TAX REVENUES, SELECTED CROP REPORTING DISTRICTS, 1982.

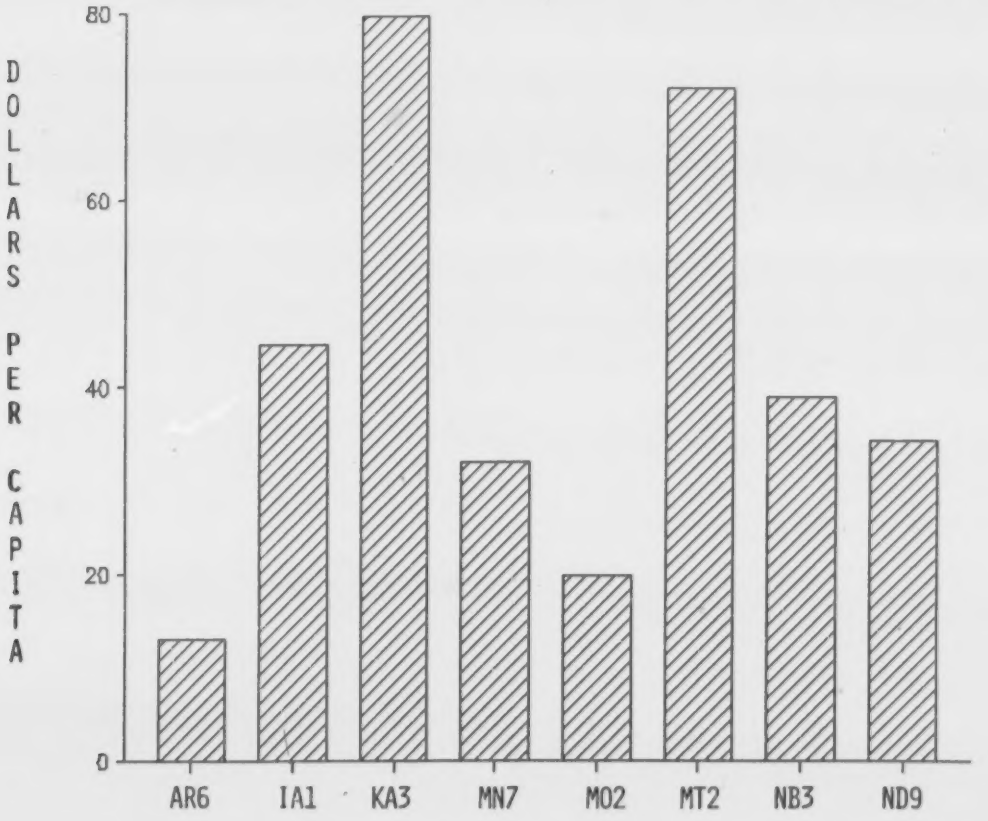


FIGURE 18: ESTIMATED LOCAL EXPENDITURE DEFICITS ATTRIBUTABLE TO LOWER PROPERTY TAXES AND CUTS IN AID, SELECTED CROP REPORTING DISTRICTS

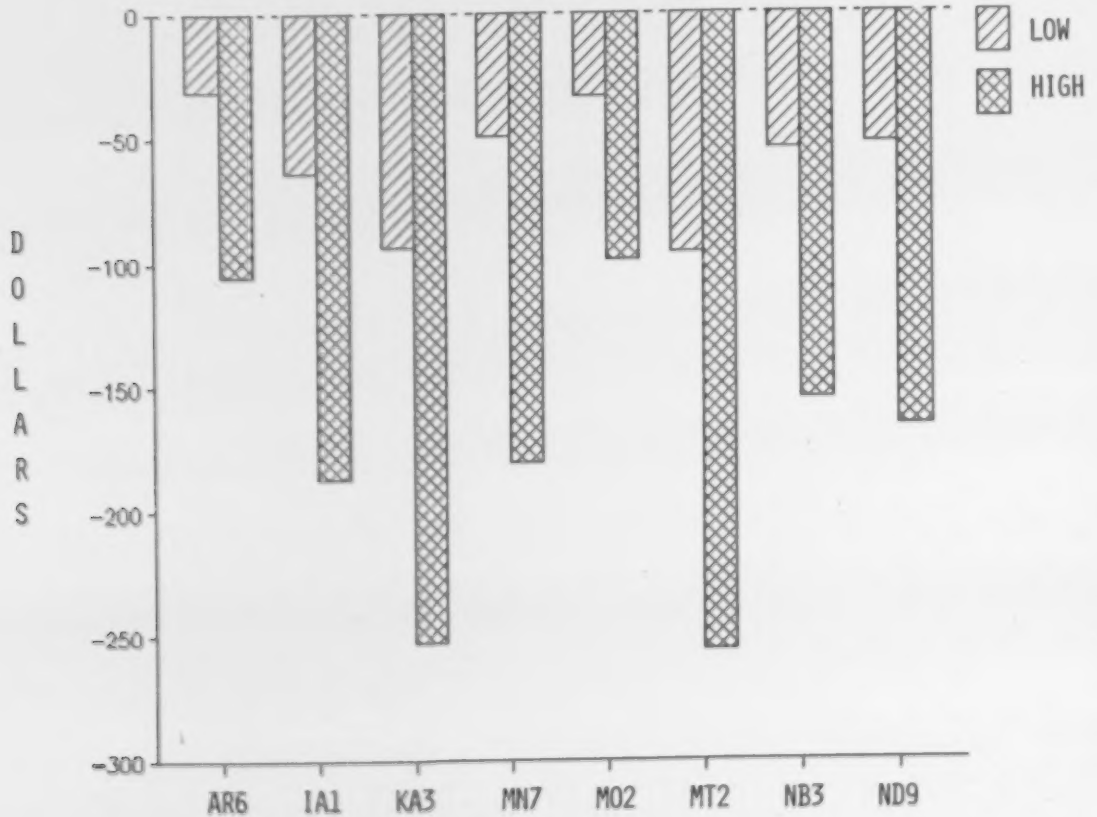
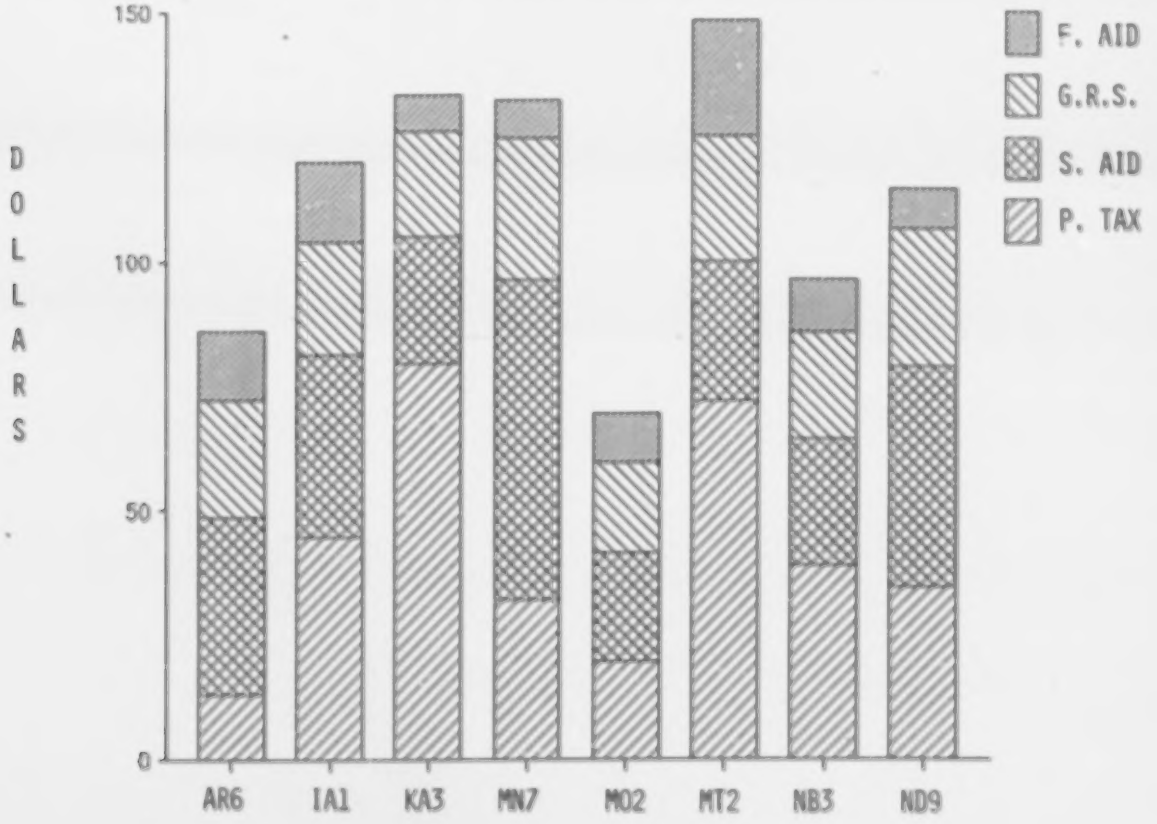


FIGURE 19: COMBINED IMPACT OF LOWER PROPERTY TAX RECEIPTS AND CUTS IN FEDERAL AND STATE AID, SELECTED CROP REPORTING DISTRICTS, 1982.



capita, or $425 for a family of four, if cuts in services were to be avioided. Even if half that deficit were made up through local tax increases, local spending would still drop by more than $50 per capita.

Table 3. Local Government Expenditure Shortfalls Created by Selected Cuts in Property Tax Receipts, and State and Federal Aids Selected Crop Reporting Districts, 1982.

	Property Tax	State Aid	Federal Aid	General Revenue Sharing	Total
	---------- $Per capita----------				
Arkansas 6	13.02	35.77	13.73	23.49	86.01
Iowa 1	44.51	36.93	15.81	22.55	119.80
Kansas 3	79.62	25.27	7.31	21.23	133.43
Minnesota 7	31.92	64.43	7.75	28.03	132.13
Missouri 2	19.72	21.56	9.70	18.24	69.22
Montana 3	71.78	27.91	23.44	25.06	148.19
Nebraska 3	38.87	25.29	10.40	21.69	96.25
North Dakota 9	34.31	44.47	7.84	27.78	114.40

Assumes 10 percent cut in property tax receipts, 10 percent cut in state aid, 50 percent cut in federal aid, and elimination of general revenue sharing.

In general, this research does not offer strong support to assertions that declining farm land values will create a financial disaster for rural local governments. Even under the extreme assumption that property tax collections would drop by 25 percent from their 1982 levels with no compensating aid increase, local revenues fell by only 12 percent or less in the regions studied. For school districts, as indicated earlier, state school foundation programs certainly will provide a cushion by automatically increasing aid. Real cuts in local expenditures

may be necessary, but predictions of wholesale disaster for rural local government seem excessive.

There is still reason for concern, however. Rural communities may well be able to weather the loss in revenues associated with lower agricultural land values if that is the only drop in revenues. But, when coupled with likely cutbacks in federal aid programs and the proposed elimination of general revenue sharing, the combined impact may be substantial. If there are also reductions in State aid--due to existing tight budget situations at the state level--rural local governments could well be in serious trouble. The cause, however, is not the farm crisis, or federal budget cuts, or state financial problems, but rather the fact that each of these problems eventually results in fewer funds available for essential local government services. Individually any one of these problems might be overcome, but combined, their impacts may overwhelm the capacity of those governments most vulnerable.

LONG TERM EFFECTS

Declining farm property values and reductions in federal and state aids appear likely to force cutbacks in local public services in many rural communities. Local millage rates will increase so that a higher proportion of local income goes to the public sector, but revenue shortfalls are likely to be so large that expenditure reductions will be necessary. In the absence of new state or federal initiatives fewer, and lower quality public services will be available in rural areas.

Problems will be most severe in the nation's agriculturally dependent counties. (figure 20) These counties, and particularly those in America's heartland, have seen the largest declines in land values. The economies of several of the states where impacts have been greatest are also among those more heavily dependent on agriculture, so additional amounts of state assistance is less likely.

Historically, residents of most of these communities have taxed themselves at or above the national average in order to provide local public services. Reeder, in a study of local revenue efforts based on 1977 data, found many of these agriculturally dependent counties with revenue efforts at or above the average for nonmetro counties. (figure 21) A number of these counties had both high revenue efforts and rapidly increasing revenues. Since farm incomes have dropped substantially since 1977, a study of revenue effort today would likely include most counties with large declines in land values among those with high revenue efforts.

In keeping with their relatively high local tax effort, levels of public services in the agriculturally dependent counties outside the south have not been inadequate. Stinson (1983), examining trends in local service provision from 1962 to 1977, found that few of the counties whose spending for services was below that needed to provide minimally adequate education and other general public services were located in areas most heavily impacted by the current decline in farm incomes.

That study also showed that America has made significant progress toward insuring that both rural and urban residents have access to minimally adequate levels of publicly provided goods and services such as education. If the farm financial crisis and the attendant loss in local property tax base makes it impossible for farm based economies to continue to fund local government at the levels necessary to provide minimally adequate services, the nation risks moving backward, increasing the social and economic disparities between rural and urban America. Should that occur, rural residents would become an increasingly disadvantaged portion of society.

POLICY OPTIONS

The fiscal problems confronting rural local governments are both immediate and long term. In the short run, the rapid increase in property tax delinquencies will cause the most difficulty. The financial stress from the resulting cash flow problems may be further exacerbated by reductions in federal and state aid.

Longer term, the dramatic declines in farm land values threaten the fiscal stability of many rural localities. Agricultural assessed values have only begun to reflect the steep drops in market values observed during the last few years, but the local property tax base will soon start to decline barring an unforeseen and unlikely increase in the market value of farm land. The farm crisis also will affect local commercial property values. In agriculturally dependent communities prolonged declines in farm income ultimately translate into reduced income and employment for the local business community. Lower commercial property values and declining property tax revenues soon follow.

Action by all levels of government is needed to ease the growing financial squeeze on rural local government. Creative solutions will be required because many of standard responses may be unfeasible, impractical or counterproductive. Local governments, for example, conceivably could raise property tax rates to compensate for looming declines in assessed valuations. But, this solution is unavailable in many communities. State-imposed caps on local tax rates, constitutional

constraints, or other legal restrictions often limit a locality's ability to raise additional revenues. Communities which do not have statutory limits still must make a difficult choice--and face likely taxpayer resistance--if they attempt to raise taxes at a time when taxpayers' income and wealth have declined appreciably.

Similarly, most fiscally distressed local communities would ordinarily be expected to turn to their states for assistance in coping with difficult times. Yet the majority of states examined in this study also are under fiscal stress and reducing their own budgets. This is especially true for states with undiversified economies and those where additional economic problems stemming from the rapid fall in oil prices are likely.

Responses to Short Term Problems--Property Tax Delinquencies

The most serious short term problems stem from unanticipated revenue shortfalls caused by increases in property tax delinquency rates. As the data on the eight crop reporting districts makes clear, there is substantial local variation in delinquency rates. But, even when delinquency rates are relatively high, local governments can anticipate and adapt to the resulting revenue shortfalls if the percent delinquent has remained relatively constant over time.

Rapid increases in property tax delinquency rates over a short period of time, and the accompanying unexpected revenue losses create a more serious problem. In Nebraska, for example, delinquency rates rocketed from a stable, long-term rate of approximately 2 percent of collections in 1980 to nearly 10

percent in 1984. Moreover, the rate of increase was still accelerating in the most recent years for which data is available. Delinquency rates approximately doubled between 1982 and 1984, and then doubled again in 1985.

Less dramatic, but substantial increases in delinquency rates have also occurred in Minnesota. There the percent of property taxes delinquent more than doubled between 1982 and 1985. Between 1985 and 1986 delinquencies again showed a sharp increase. As in Nebraska, the largest increase occurred in the last year for which data is available. Iowa, Kansas and Montana have also seen abrupt increases in delinquency rates during the past two years.

In general, economists consider delinquent taxes to be a short term, cash flow problem for local government because most delinquent taxes will eventually be paid. During the depression farm properties were sold for back taxes, but today's tax levies remain small compared to the value of the property, even at current farm land values. The short term revenue shortfalls are an important problem for local government, however, especially in states like Nebraska which rely heavily on the property tax to finance local government services. In the Nebraska counties surveyed, 1985 delinquent taxes totalled more than $5.5 million, or about 4 percent of local revenues.

There are four principal methods for dealing with tax delinquencies:

--permitting localities to adjust property tax levies upward in anticipation of delinquent collections;

--insuring that penalities and collection procedures are such that taxpayers do not find that falling delinquent on property taxes is advantageous relative to other loan obligations;

--instituting governmental efficiencies which enable local revenues to be used more efficiently.

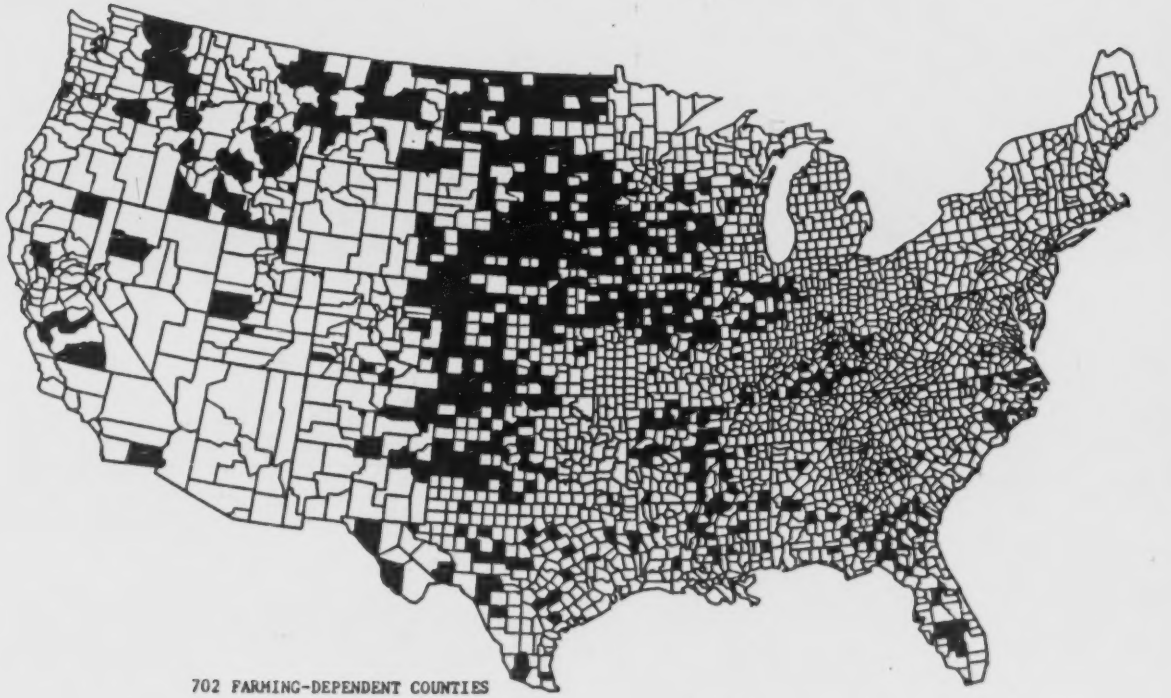
--obtaining additional nonproperty tax sources of revenue such as intergovernmental aid.

The first three options fall within the province of state and local responsibilities, while the fourth option involves federal policies as well.

Delinquency anticipation and penalty provisions--Most local governments have already exhausted these local options for dealing with property tax delinquencies, although some individual jurisdictions could do more. Either by custom or by law, most states already permit localities to adjust their tax levies in anticipation of delinquent taxes. Local governments in each of the eight farm belt states surveyed are allowed to levy taxes at higher rates in anticipation of delinquencies, to consider prior delinquency rates in planning revenues, or both. (table 4) In addition, some states allow local governments to carry a cash reserve over from one year to the next.

The usefulness of these provisions is limited by two factors. First, revenues raised by anticipating delinquencies at the prior year's rate will be insufficient when delinquencies are rising rapidly. North Dakota, for example, permits additional levies of 5 percent in anticipation of delinquent taxes. But, some North Dakota counties have had delinquencies averaging 10 percent or more of the total tax levy recently. Second,

NONMETRO AGRICULTURE COUNTIES



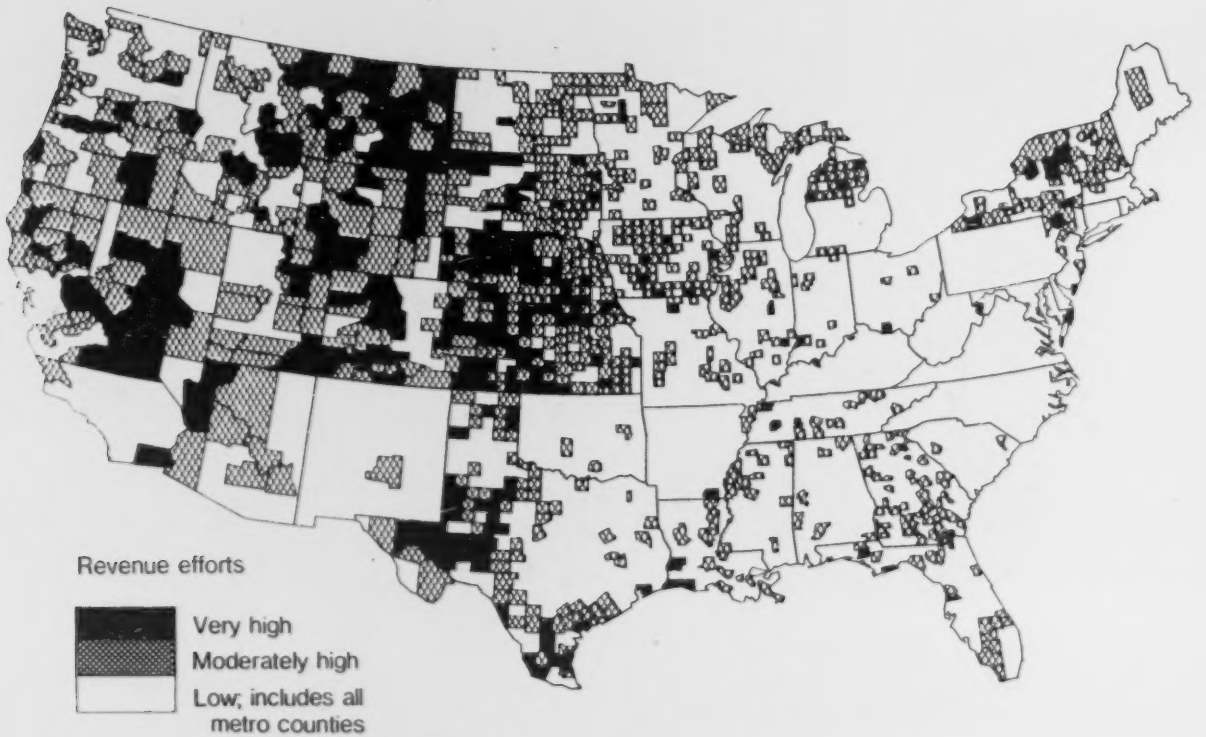
702 FARMING-DEPENDENT COUNTIES

20 percent or more of total labor and proprietor income was from production farming/ranching during 1975-79.

NONMETRO AGRICUL

SOURCE: ECONOMIC RESEARCH SERVICE, USDA

Nonmetro Counties with High Revenue Efforts in 1977



SOURCE: ECONOMIC RESEARCH SERVICE, USDA

communities are often unable to utilize delinquency anticipation levies because local tax rates have reached statutory levy limits. One municipal bond advisory group estimates that "a substantial majority of local jurisdictions [in the farm belt] are taxing at their limits, especially school districts." (American Portfolio Advisory Service)

Table 4: Property Tax Delinquency and Penalty Provisions, Selected States.

State	Anticipate Prior Year Delinquent Tax Rate	Anticipate Additional Delinquent Taxes	Reserve Fund	Penalty Provision
Arkansas	X		X	10% penalty 10% interest
Iowa	X			1% /month
Kansas	X	X		1 1/2% /month
Minnesota		X	X	10% penalty + 8% interest
Missouri			X	18% per annum 2% penalt
Montana		X		5/6% /month 2% penalty
Nebraska	X	X	X	14% /annum
North Dakota		X		3% /quarter 5% bonus for early payment

Governments may also minimize delinquencies by making sure that penalities are sufficiently high, relative to interest charged on farm and commercial loans, to make letting property taxes go unpaid an unattractive alternative. This is generally

the case in the states examined. (See Appendix C) At present, interest plus penalities are substantially above current interest rates in all states but Iowa and Montana. Officials in Iowa attribute at least part of the higher delinquency rates recently observed to the sizeable spread between interest rates from commercial lenders and the interest and penalties on delinquent taxes.

Cutback management--Local governments can also try to stretch reduced local revenues farther by introducing management efficiencies. Cutback management techniques such as banding together with other jurisdictions to deliver some specialized services, and contracting with private firms for others have become increasingly popular suggestions for local governments in recent years.

Such strategies may offer savings for certain rural governments. One study notes that non-metropolitan cities engaged in only two-thirds as many joint service arrangements as did metropolitan cities. (ACIR, 1985) On the other hand, non-metro counties are just as active in utilizing such efficiency techniques as metro counties. There also are reasons to believe that many rural governments face unique problems in realizing saving from contracting for services and alternative structural arrangements. Small communities and sparsely populated rural areas offer small potential markets for private service contractors. In addition, most already utilize volunteerism and informal service arrangements very heavily.

Structural consolidations also have been utilized heavily by rural governments, and the available cost savings may have been exhausted in most areas. School consolidation, the most common example, is largely complete. The number of school districts in the United States has declined dramatically in the last 40 years, from a total of 108,579 in 1942 to just 14,851 in 1982. Almost all of this decline has taken place as a result of consolidating small rural districts. The rate of change has slowed drastically in the last decade, however, suggesting that most districts have reached their geographic limits. The number of districts declined 48 percent between 1952 and 1962; 54 percent between 1962 and 1972; but only 6 percent between 1972 and 1982.

The revenue expenditure squeeze on the local public sector will be less severe if significant numbers of farm families leave to take jobs in the urban centers. But, as Hines, Green, and Petrulis (1985) note, the current restructuring of agriculture may be accompanied by a change of ownership of many existing farms rather than a substantial decline in the total number of farms. Those facing the greatest financial difficulty today are those classed as medium sized, commercial farmers. The more than one-half of all farmers receiving less than $40,000 in gross receipts from the sale of agricultural commodities (and thus are considered to have off-farm sources of income to support their families) generally are having fewer financial problems.

Research done on South Dakota rural governments reinforces the conclusion that further structural efficiencies are limited. In 1957, South Dakota had 7.5 local governments per 1,000

population, ten times the national average of .76. By 1967 this number had fallen to 5.3, and by 1977 it reached 2.6. Since 1977 it has remained constant to 2.6, even though the national average has continued to fall. (Smith) That research also indicates that for counties under 15,000 in population, there is an inverse relationship between county population and the average per capita cost of government, again suggesting that in many communities, small populations and large territories impose unique constraints on governmental costs and efficiencies which cannot be eliminated through management techniques or structural changes. These constraints may explain why relatively small drops in revenues produced such painful service cutbacks in the earlier case studies of Fulda, Minnesota and School District 417.

State and federal aid--A final option for dealing with the fiscal effects of unexpected tax delinquencies is to cushion those impacts with increased state or federal aid. Unfortunately, severe budgetary stress at the federal level and in many states is actually compounding local revenue shortfalls rather than alleviating them. In all but one of the states in our sample revenues grew more slowly than the national average in fiscal 1985, 1986 or both. Four of these states experienced absolute declines in revenues. As a result, six of the eight states examined took the extreme step of making mid-year reductions in their fiscal 1986 budget after it had already been adopted. Five states reduced state aid to education.

Federal aid reductions also compound the effects of tax delinquencies. Between 1982 and 1984, total federal aid to

general purpose local governments, not including General Revenue Sharing, rose .1 percent nationwide in current dollars. In the agriculturally dependent counties examined in this study, however, federal aid actually declined 18 percent during this same period. Although individual jurisdictions varied in the amount of federal aid received, agriculturally dependent local governments experienced declines in federal aid in five of the eight states examined--in sharp contrast to the overall rise nationwide.

This decline in federal aid at a time of severe economic distress takes on added significance given the scheduled phase-out of General Revenue Sharing at the end of the 1986 fiscal year. Elimination of revenue sharing, without some form of replacement, will have a far more serious impact on general purpose governments in agriculturally-dependent areas than on those in urban areas. Revenue sharing comprised, on average, 44.5 percent of all federal aid received by general purpose local governments in farm dependent areas, compared with a national average of 21.8 percent for all general purpose local governments. Thus, the proposed elimination of General Revenue Sharing will hit farm dependent local governments twice as hard as the average locality in America, compounding the steep declines in taxable valuations in rural areas and the effects of prior federal aid reductions.

Responses to the Long-Term Problem

Short term, cash flow problems of local government can be eased if the policy actions reviewed are taken, but such

activities can do little to redress the longer term imbalances and development needs in distressed rural communities. Many of the potential programs which address the economic development needs of rural communities--such as farm income and credit programs and industrial policies--are outside the intergovernmental focus of this study. But, federal and state programs to insure the existence of the basic infrastructure required for development and those programs which enable rural communities to provide basic services and address their own economic development needs require consideration. At the state level, such policies include diversified revenue systems and local property tax relief, especially for education. At the federal level, such policies center on provisions of the tax code that encourage rural governments to address their individual infrastructure needs.

State revenue systems--Local government revenues and service levels cannot be considered in isolation. Even where the impact of falling land values is fully transmitted through property tax assessments the severity of this devaluation will depend on the importance of the property tax as a percentage of total local revenues.

Local governments' reliance on the property tax typically is inversely related to the level of state aid available. State aids can act as a compensatory buffer protecting local government revenues from abrupt changes in the local economy. As illustrated earlier the eight states sampled varied significantly in the amount of financial assistance provided localities. In

North Dakota, for example, state aid was 41 percent of all local, general revenues in 1982--well above the national average of 32.7 percent. In Nebraska, on the other hand, total state aid to local governments was only 20.6 percent of local general revenues--about half that in nearby North Dakota and almost 40 percent below the national mean.

Overall levels of state aid are important, but two related factors must also be considered. First, even within states, there are significant variations in the relative amounts of state aid received, both for different functions and for different types of local government. In addition, state aid levels over time are dependent on the overall health of the state's budget and economy. High levels of dependence on state aid levels may be a mixed blessing if aid is cut back due to state budgetary constraints.

State revenue sources usually are more sensitive to changes in economic conditions than is the property tax, and this can be a significant problem. States attempt to minimize this risk, however, by diversifying and broadening their tax base. There is a tradeoff, however, since a stable tax base, one which does not fluctuate with economic conditions, typically creates a regressive tax system.

Federal policies--Current federal budget constraints limit the amount of direct federal assistance likely to be available to rural communities. In the near future, changes in federal tax policy could have more substantial impacts on the ability of rural communities to address their long term needs than will

budget cutbacks. Two elements of the federal revenue code are of particular importance--the federal income tax deduction for state and local income, sales, and property taxes; and the exemption of interest from state and local government bonds.

The deduction for state and local taxes cuts the effective costs of such taxes to the individual taxpayer, providing the same income tax treatment for money paid to state and local government as is afforded contributions to charity. No preferential treatment is given to particular state or local tax instrument. No attempt is made to determine which services should be provided by which level of government, and no implicit or explicit federal mandates are imposed on state or local governments. The deductibility of state and local taxes simply provides a constitutionally preferred method by which the national government can assist its intergovernmental partners in addressing their own, unique public service needs.

The importance of deductibility can best be appreciated by estimating the effects of its elimination on state and local government spending. Several recent proposals for tax reform have advocated eliminating the deduction for state and local taxes in order to provide revenues for lowering overall tax rates. Estimates vary widely, but the Congressional Research Service has calculated that the long term impact of eliminating deductibility would reduce state and local revenues 20.5 percent below what they would otherwise be. Other estimates are smaller,

in part because some analysts predict shifts in state-local taxes to forms that would remain deductible, such as taxes on business. (Feldstein and Metcalf)

Coming on top of the revenue squeeze resulting from the farm crisis, elimination of deductibility would profoundly restrict the capacity of state and local governments to meet long term rural development needs. The impact would be particularly severe in agriculturally dependent states, because residents of these states would receive fewer net benefits from tax rate reductions. Taxpayers in the ten states where agricultural production is greatest would, on average, benefit 4 percent less than the average taxpayer from President Reagan's tax reform plan. Residents of the 8 states examined in this study would benefit an average of 10 percent less than the average taxpayer. (ACIR, 1986).

Tax exempt bonds--While deductibility encourages state and local governments to address their overall public service needs, the tax exempt treatment of municipal bonds provides direct financial support for public infrastructure investments, laying a foundation for the diversification of rural economies. In 1982, for example, a total of $87.5 billion in tax exempt bonds were issued to finance a wide range of traditional public facilities and newer forms of public-private partnerships. Sixteen billion dollars went to finance school construction, transportation projects, and water and sewer facilities. An additional $12.7 billion in industrial revenue bonds was used to finance commercial and industrial development projects. All told, the

proceeds of tax exempt bonds comprised an average of 47 percent of all state and local capital expenditures between 1980 and 1984.

Despite their importance to all local communities, the tax exempt status of many municipal bonds has been threatened. Proposed changes in federal tax law would reduce the total issuance of bonds by 40 to 70 percent. In addition, many provisions of particular importance to the bonds offered by rural communities are proposed for elimination. The elimination of small issue industrial development bonds (IDB's) which fund "aggie bonds" providing start up capital for first-time farms, and the limitation of public-private partnerships financed by tax exempt bonds are two examples of the types of provisions under attack.

The House-passed tax reform bill also imposes major limits on bonds benefiting rural communities, including elimination of the bank interest deduction for purchasing small issue IDB's; the retroactive elimination of tax exempt status for violations of arbitrage provisions; restrictions on the use of tax increment financing; and restrictions on yields from investments during project construction periods.

Eliminating the bank interest deduction for small issue IDB's would destroy the market for most small communities. Small rural banks are virtually the only purchasers of such issuances, and this deduction is critical to make them a viable investment.

The retroactive penalty provision would also have its most severe impact on rural communities because it would raise

interest costs on bonds and force communities to use high cost underwriters. Since 50 percent of the bonds currently issued by the most rural communities are unrated and carry above average interest rates, statutory changes which further increase those interest rates will pose particular problems for rural America. (Palumbo and Sachs, 1986).

Proposals to limit the use of tax increment financing for development areas 15 acres and above would restrict the use of such bonds to large urban areas since small communities rarely have blighted areas of such size.

Finally, restricting the yield local governments may earn on investments of bond proceeds during the period when public facilities are under construction increases financial burdens on small communities for their infrastructure projects. Communities reduce the costs of infrastructure by investing bond proceeds until needed to pay construction costs. Forcing localities to invest bond proceeds at reduced yields inevitably will force these governments to issue more bonds to finance the same projects. Because rural communities have weaker tax bases and pay higher average interest rates on bonds already, they will be among the governments most penalized by such proposals.

Targeted Fiscal Assistance

Adoption of a smaller, but better targetted program of general assistance grants to local governments is one possible federal policy response. Such a program would help alleviate both short and long-run problems, while contributing to the reduction of the federal deficit. The principle advantages of

General Revenue Sharing--flexible, general purpose grants with little administrative overhead--would be retained, but benefits would be limited to those communities most in need.

The impact of a more tightly targeted revenue sharing program on revenues of the communities in this study is shown in table 5. That program's provisions are shown in Appendix D.

Table 5: Comparison of Funding Levels under General Revenue Sharing and Targeted Fiscal Assistance; County Averages, Selected Crop Reporting Districts

State	GRS Allocation $Per Capita	TFA Allocation $Per Capita	Percentage Change
Arkansas	6.25	13.41	112
Iowa	6.90	8.17	15
Kansas	8.62	8.84	2
Minnesota	9.30	13.17	39
Missouri	2.25	5.03	41
Montana	11.24	18.76	90
Nebraska	7.44	11.93	20
North Dakota	9.04	13.31	43

In general, increased funds are directed toward poorer communities and those with above average tax effort. Usually such communities have levels of income substantially below the statewide average. As a result, they would receive grants averaging 53 percent higher under targeted fiscal assistance. On the other hand, communities with per capita incomes substantially over their state average would recieve reduced amounts of aid or, in some cases, no aid at all. This allows funds to be concentrated on communities most in need, enabling them to maintain a minimum level of basic public services.

CONCLUSION

Many of the financial problems which will face rural local government can be limited if governments at all levels begin to respond now, before the full effects of declining land values and increased service demands are felt. State and local governments, must explore all available avenues of potential savings, seeking new ways to deliver basic services, and building on their economic strengths. The federal government must give affected state and local governments the time and the tools to respond. In particular, the federal government must avoid implementing those budget reductions and changes in the tax code that will compound the problems of rural governments. Federal actions must be designed to avoid making the situation worse at the very time rural localities are least able to cope with financial problems. Rural communities face unprecedented economic and social challenges as agriculture restructures and America enters its third century. The costs of assisting that transition pale when compared to those of ignoring it.

APPENDIX TABLE 1: Counties in Crop Reporting Districts Surveyed

ARKANSAS CRD 6

Arkansas
Crittenden
Cross
Lee
Lonoke
Monroe
Phillips
Prairie
St. Francis
Woodruff

IOWA CRD 1

Buena Vista
Cherokee
Clay
Dickinson
Emmet
Lyon
O'Brien
Osceola
Palo Alto
Plymouth
Pochantas
Sioux

KANSAS CRD 3

Clark
Finney
Ford
Grant
Gray
Hamilton
Kaskell
Hodgeman
Kearny
Meade
Morton
Seward
Stanton
Stevens

MINNESOTA CRD 7

Cottonwood
Jackson
Lincoln
Lyon
Murray
Nobles
Pipestone
Redwood
Rock

MISSOURI CRD 2

Adair
Carrol
Chariton
Grundy
Linn
Livingston
Macon
Mercer
Putnam
Randolph
Schuyler
Sullivan

MONTANA CRD 2

Blaine
Choteau
Glacier
Hill
Liberty
Pondera
Teton
Toole

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NEBRASKA CRD 3

Antelope
Boone
Burt
Cedar
Cuming
Dakota
Dixon
Knox
Madison
Pierce
Stanton
Thurston
Wayne

NORTH DAKOTA CRD 9

Dickey
Lamoure
Logan
McIntosh
Ransom
Richland
Sargent

APPENDIX TABLE 3:
AGRICULTURE TAXABLE VALUATION, SELECTED CROP REPORTING DISTRICTS, 1981-1985

		1981	1982	1983	1984	1985
		CURRENT DOLLARS (000's)				
ARKANSAS	CRD6	62,748	262,462	359,184	380,195	381,059
IOWA	CRD1	2,715,687	2,824,304	2,935,195	3,053,740	3,282,354
KANSAS	CRD3	202,681	202,321	202,698	197,476	198,172
MINNESOTA	CRD7	906,414	1,021,888	1,065,374	1,012,795	804,312
MISSOURI	CRD2	182,736	180,968	182,105	165,652	183,032
MONTANA	CRD2	45,163	45,184	45,484	45,282	45,367
NEBRASKA	CRD3	1,860,600	1,871,824	1,878,069	1,877,190	1,876,332
NORTH DAKOTA	CRD9	63,150	63,409	63,844	66,907	61,647
		1985 DOLLARS (000's)				
ARKANSAS	CRD6	74,422	294,482	387,504	392,076	381,059
IOWA	CRD1	3,220,931	3,168,869	3,166,624	3,149,169	3,282,354
KANSAS	CRD3	240,389	227,004	218,680	203,647	198,172
MINNESOTA	CRD7	1,075,049	1,146,558	1,149,375	1,044,445	804,312
MISSOURI	CRD2	216,733	203,046	196,463	170,829	183,032
MONTANA	CRD2	53,565	50,696	49,070	46,697	45,367
NEBRASKA	CRD3	2,206,758	2,100,187	2,026,148	1,935,852	1,876,332
NORTH DAKOTA	CRD9	74,899	71,145	68,878	68,998	61,647

APPENDIX TABLE 3(A):
ARKANSAS, CRD6, TAXABLE VALUATION OF AGRICULTURAL LAND
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	CURRENT DOLLARS (000's)				
ARKANSAS	11,276	56,362	55,300	55,234	55,225
CRITTENDEN	13,759	39,400	38,067	38,829	39,401
CROSS	n.a.	n.a.	44,122	44,102	44,071
LEE	n.a.	27,475	27,429	27,443	27,444
LONOKE	8,702	48,097	52,939	47,585	47,971
MONROE	7,409	7,399	29,329	29,272	29,284
PHILLIPS	9,901	9,901	38,428	37,983	37,554
PRAIRIE	n.a.	36,183	35,922	36,002	36,092
ST. FRANCIS	11,701	37,645	37,648	37,650	37,835
WOODRUFF	n.a.	n.a.	n.a.	26,095	26,182
TOTAL	62,748	262,462	359,184	380,195	381,059
	1985 DOLLARS (000's)				
ARKANSAS	13,374	63,238	59,660	56,960	55,225
CRITTENDEN	16,319	44,207	41,068	40,042	39,401
CROSS	n.a.	n.a.	47,601	45,480	44,071
LEE	n.a.	30,827	29,592	28,301	27,444
LONOKE	10,321	53,827	57,113	49,072	47,971
MONROE	8,787	8,302	31,641	30,187	29,284
PHILLIPS	11,743	11,109	41,458	39,170	37,554
PRAIRIE	n.a.	40,597	38,754	37,127	36,092
ST. FRANCIS	13,878	42,238	40,616	38,827	37,835
WOODRUFF	n.a.	n.a.	n.a.	26,910	26,182
TOTAL	74,422	294,482	387,504	392,076	381,059

n.a. - not available

Court ordered re-assessments occurred in 1981 in Prairie and St. Francis counties; 1982 in Arkansas, Crittenden, Cross, Lee, Lonoke, and Woodruff counties; and 1983 in Monroe and Phillips counties.

APPENDIX TABLE 3(B):
IOWA, CRD1, TAXABLE VALUATION OF AGRICULTURAL LAND
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	----------CURRENT DOLLARS (000's)----------				
BUENA VISTA	244,813	254,692	263,849	274,525	285,738
CHEROKEE	192,751	200,525	208,221	216,520	265,785
CLAY	241,752	251,478	266,270	276,920	287,993
DICKINSON	150,749	156,499	163,151	169,645	176,368
EMMET	170,698	177,427	177,698	184,983	217,018
LYON	208,187	216,561	238,596	248,306	258,214
O'BRIEN	256,583	266,815	279,370	290,984	302,547
OSCEOLA	182,074	189,325	189,076	196,639	204,603
PALO ALTO	245,323	255,286	278,910	289,809	301,087
PLYMOUTH	249,206	259,314	283,772	295,304	307,007
POCAHONTAS	288,624	300,202	308,080	320,520	333,242
SIOUX	284,927	296,180	278,202	289,585	342,752
TOTAL	2,715,687	2,824,304	2,935,195	3,053,740	3,282,354
	----------1985 Dollars (000's)----------				
BUENA VISTA	290,360	285,764	284,652	283,104	285,738
CHEROKEE	228,612	224,989	224,638	223,286	265,785
CLAY	286,730	282,158	287,264	285,574	287,993
DICKINSON	178,796	175,592	176,015	174,946	176,368
EMMET	202,456	199,073	191,708	190,764	217,018
LYON	246,920	242,981	257,408	256,066	258,214
O'BRIEN	304,320	299,366	301,397	300,077	302,547
OSCEOLA	215,949	212,422	203,984	202,784	204,603
PALO ALTO	290,965	286,430	300,900	298,866	301,087
PLYMOUTH	295,570	290,950	306,146	304,532	307,007
POCAHONTAS	342,322	336,826	332,370	330,536	333,242
SIOUX	337,937	332,313	300,137	298,635	342,752
TOTAL	3,220,935	3,168,864	3,166,619	3,149,170	3,282,354

APPENDIX TABLE 3(C):
KANSAS, CRD3, TAXABLE VALUATION OF AGRICULTURAL LAND
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	Current Dollars (000's)				
CLARK	10,486	10,485	10,483	10,482	10,483
FINNEY	24,938	24,788	24,718	19,628	19,569
FORD	21,965	21,944	21,951	21,991	22,001
GRANT	11,233	11,101	11,107	11,079	11,055
GRAY	19,595	19,590	19,599	19,634	19,624
HAMILTON	11,191	11,186	11,199	9,746	9,745
HASKELL	13,424	13,496	13,666	15,997	15,989
HODGEMAN	14,174	14,173	14,177	14,176	14,156
KEARNY	12,635	12,635	12,613	12,609	12,598
MEADE	16,309	16,344	16,363	16,372	16,373
MORTON	8,449	8,432	8,432	8,429	8,392
SEWARD	10,870	10,870	10,870	10,143	10,854
STANTON	13,401	13,387	13,394	13,028	12,998
STEVENS	14,011	13,890	14,126	14,162	14,335
TOTAL	202,681	202,321	202,698	197,476	198,172
	1985 Dollars (000's)				
CLARK	12,437	11,764	11,310	10,810	10,483
FINNEY	29,578	27,812	26,667	20,241	19,569
FORD	26,052	24,621	23,682	22,678	22,001
GRANT	13,323	12,455	11,983	11,425	11,055
GRAY	23,241	21,980	21,144	20,248	19,624
HAMILTON	13,273	12,551	12,082	10,051	9,745
HASKELL	15,921	15,143	14,744	16,497	15,989
HODGEMAN	16,811	15,902	15,295	14,619	14,156
KEARNY	14,986	14,176	13,607	13,003	12,598
MEADE	19,343	18,338	17,653	16,884	16,373
MORTON	10,021	9,461	9,097	8,692	8,392
SEWARD	12,892	12,196	11,727	10,460	10,854
STANTON	15,894	15,020	14,450	13,435	12,998
STEVENS	16,618	15,585	15,240	14,605	14,335
TOTAL	240,389	227,004	218,680	203,647	198,172

APPENDIX TABLE 3(D):
MINNESOTA, CRD7, TAXABLE VALUATION OF AGRICULTURAL LAND
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	CURRENT DOLLARS (000's)				
COTTONWOOD	119,957	136,921	143,714	139,207	109,084
JACKSON	151,864	168,587	184,164	169,452	120,953
LINCOLN	46,792	49,938	50,017	47,473	40,968
LYON	80,086	92,682	98,470	96,695	77,170
MURRAY	100,659	118,152	118,473	110,467	87,970
NOBLES	121,977	132,971	137,497	124,729	97,385
PIPESTONE	50,819	57,114	56,920	52,270	43,314
REDWOOD	159,279	182,832	193,925	192,667	164,887
ROCK	74,982	82,690	82,194	79,834	62,580
TOTAL	906,414	1,021,888	1,065,374	1,012,795	804,312
	1985 DOLLARS (000's)				
COTTONWOOD	142,274	153,626	155,045	143,557	109,084
JACKSON	180,118	189,155	198,685	174,748	120,953
LINCOLN	55,498	56,031	53,961	48,957	40,968
LYON	94,985	103,989	106,234	99,716	77,170
MURRAY	119,386	132,567	127,814	113,919	87,970
NOBLES	144,670	149,193	148,338	128,627	97,385
PIPESTONE	60,274	64,082	61,408	53,904	43,314
REDWOOD	188,913	205,137	209,215	198,688	164,887
ROCK	88,933	92,778	88,674	82,329	62,580
TOTAL	1,075,050	1,146,558	1,149,375	1,044,444	804,312

APPENDIX TABLE 3(E):
MISSOURI, CRD2, TAXABLE VALUATION OF AGRICULTURAL LAND
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	CURRENT DOLLARS (000's)				
ADAIR	14,618	14,983	15,417	13,724	14,692
CARROLL	22,439	22,563	22,633	22,113	19,116
CHARITON	22,116	22,259	22,557	19,725	22,469
GRUNDY	12,120	12,282	12,311	11,658	14,611
LINN	14,532	14,631	14,717	14,400	17,010
LIVINGSTON	15,872	16,012	16,019	13,137	18,720
MACON	18,517	19,035	18,981	15,848	20,839
MERCER	12,502	12,550	12,580	11,101	11,624
PUTNAM	15,050	11,963	11,954	10,208	9,357
RANDOLPH	17,251	17,137	17,511	16,824	16,405
SCHUYLER	6,000	6,083	6,085	5,780	8,033
SULLIVAN	11,719	11,470	11,340	11,134	10,156
TOTAL	182,736	180,968	182,105	165,652	183,032
	1985 DOLLARS (000's)				
ADAIR	17,338	16,811	16,633	14,153	14,692
CARROLL	26,614	25,316	24,418	22,804	19,116
CHARITON	26,231	24,975	24,336	20,341	22,469
GRUNDY	14,375	13,780	13,282	12,022	14,611
LINN	17,236	16,416	15,877	14,850	17,010
LIVINGSTON	18,825	17,965	17,282	13,548	18,720
MACON	21,962	21,357	20,478	16,343	20,839
MERCER	14,828	14,081	13,572	11,448	11,624
PUTNAM	17,850	13,422	12,897	10,527	9,357
RANDOLPH	20,460	19,228	18,892	17,350	16,405
SCHUYLER	7,116	6,825	6,565	5,961	8,033
SULLIVAN	13,899	12,869	12,234	11,482	10,156
TOTAL	216,733	203,046	196,463	170,829	183,032

APPENDIX TABLE 3(F):
MONTANA, CRD2, TAXABLE VALUATION OF AGRICULTURAL LAND
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	Current Dollars (000's)				
BLAINE	3,827	3,828	4,258	3,864	3,879
CHOTEAU	12,596	12,595	12,599	12,702	12,707
GLACIER	3,186	3,190	3,196	3,211	3,205
HILL	6,651	6,651	6,675	6,745	6,743
LIBERTY	3,617	3,610	3,600	3,591	3,678
PONDERA	5,127	5,128	4,959	4,954	4,946
TETON	5,077	5,075	5,078	5,095	5,094
TOOLE	5,082	5,105	5,115	5,118	5,113
TOTAL	45,163	45,184	45,484	45,282	45,367
	1985 Dollars (000's)				
BLAINE	4,539	4,295	4,594	3,985	3,879
CHOTEAU	14,939	14,132	13,592	13,099	12,707
GLACIER	3,779	3,579	3,448	3,311	3,205
HILL	7,888	7,462	7,201	6,956	6,743
LIBERTY	4,290	4,050	3,884	3,703	3,678
PONDERA	6,081	5,754	5,350	5,109	4,946
TETON	6,022	5,694	5,478	5,254	5,094
TOOLE	6,027	5,728	5,518	5,278	5,113
TOTAL	53,565	50,696	49,070	46,697	45,367

APPENDIX TABLE 3(G):
NEBRASKA, CRD3, TAXABLE VALUATION OF AGRICULTURAL LAND
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	CURRENT DOLLARS (000's)				
ANTELOPE	193,660	196,185	194,968	196,276	196,506
BOONE	148,896	151,699	154,029	155,051	156,211
BURT	171,402	169,884	169,888	170,466	170,563
CEDAR	180,052	185,525	185,143	182,849	182,884
CUMING	194,859	195,424	195,441	195,596	195,346
DAKOTA	71,400	70,072	71,458	71,405	71,417
DIXON	114,078	114,282	114,717	114,667	114,713
KNOX	160,737	160,653	161,630	160,066	161,360
MADISON	152,677	152,380	153,173	153,166	149,375
PIERCE	143,933	146,305	146,785	146,867	147,321
STANTON	116,238	115,658	116,486	116,366	116,296
THURSTON	86,586	86,697	87,224	87,297	87,176
WAYNE	126,082	127,060	127,127	127,118	127,164
TOTAL	1,860,600	1,871,824	1,878,069	1,877,190	1,876,332
	1985 DOLLARS (000's)				
ANTELOPE	229,690	232,685	210,340	202,410	196,506
BOONE	176,598	179,922	166,174	159,896	156,211
BURT	203,291	201,490	183,283	175,793	170,563
CEDAR	213,550	220,041	199,741	188,563	182,884
CUMING	231,112	231,782	210,851	201,708	195,346
DAKOTA	84,684	83,109	77,092	73,636	71,417
DIXON	135,302	135,544	123,762	118,250	114,713
KNOX	190,642	190,542	174,374	165,068	161,360
MADISON	181,082	180,730	165,250	157,952	149,375
PIERCE	170,711	173,525	158,358	151,457	147,321
STANTON	137,864	137,176	125,670	120,002	116,296
THURSTON	102,695	102,827	94,101	90,025	87,176
WAYNE	149,539	150,699	137,150	131,090	127,164
TOTAL	2,206,759	2,220,071	2,026,147	1,935,852	1,876,332

APPENDIX TABLE 3(H):
NORTH DAKOTA, CRD9, TOTAL TAXABLE VALUATION
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	Current Dollars (000's)				
DICKEY	8,725	8,985	8,985	9,637	8,482
LAMOURE	10,165	10,166	9,774	10,788	9,603
LOGAN	5,341	5,323	4,726	5,247	4,877
MCINTOSH	5,572	5,588	4,693	5,397	5,217
RANSOME	7,795	7,789	8,489	8,649	8,054
RICHLAND	17,897	17,902	18,984	18,993	18,039
SARGENT	7,655	7,656	8,193	8,196	7,375
TOTAL	63,150	63,409	63,844	66,907	61,647
	1985 Dollars (000's)				
DICKEY	10,348	10,081	9,693	9,938	8,482
LAMOURE	12,056	11,406	10,545	11,125	9,603
LOGAN	6,335	5,972	5,099	5,411	4,877
MCINTOSH	6,609	6,270	5,063	5,566	5,217
RANSOME	9,245	8,739	9,158	8,919	8,054
RICHLAND	21,227	20,086	20,481	19,587	18,039
SARGENT	9,079	8,590	8,839	8,452	7,375
TOTAL	74,899	71,145	68,878	68,998	61,647

APPENDIX TABLE 4:
TOTAL TAXABLE VALUATION, SELECTED CROP REPORTING DISTRICTS, 1981-1985

		1981	1982	1983	1984	1985
		CURRENT DOLLARS (000's)				
ARKANSAS	CRD6	536,824	1,051,848	1,172,503	1,190,558	1,214,791
IOWA	CRD1	5,716,094	5,972,158	6,207,936	6,559,833	6,845,966
KANSAS	CRD3	1,515,885	1,655,603	1,625,413	1,587,394	1,612,888
MINNESOTA	CRD7	1,222,415	1,387,091	1,450,725	1,400,188	1,203,303
MISSOURI	CRD2	630,082	652,653	673,193	694,379	1,081,884
MONTANA	CRD2	258,920	260,355	249,312	267,587	288,838
NEBRASKA	CRD3	3,751,008	3,830,542	4,084,217	4,126,113	4,109,370
NORTH DAKOTA	CRD9	83,310	91,409	92,176	95,437	88,830
		1985 DOLLARS (000's)				
ARKANSAS	CRD6	636,698	1,180,173	1,264,950	1,227,763	1,214,791
IOWA	CRD1	6,779,553	6,700,761	6,697,408	6,764,828	6,845,966
KANSAS	CRD3	1,797,910	1,857,587	1,753,571	1,637,000	1,612,888
MINNESOTA	CRD7	1,449,841	1,556,316	1,565,109	1,443,944	1,203,303
MISSOURI	CRD2	747,307	732,277	726,272	716,078	1,081,884
MONTANA	CRD2	307,091	292,118	268,969	275,949	288,838
NEBRASKA	CRD3	4,448,870	4,297,868	4,406,242	4,255,054	4,109,370
NORTH DAKOTA	CRD9	98,810	102,561	99,444	98,419	88,830

APPENDIX TABLE 2: AVERAGE VALUE PER ACRE OF FARM REAL ESTATE, 1977-86, SELECTED CROP REPORTING DISTRICTS

		1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
		Current Dollars									
ARKANSAS	CRD6	630	725	907	1,015	1,226	1,316	1,142	875	788	610
IOWA	CRD1	1,797	1,842	2,208	2,506	2,633	2,375	2,013	1,645	1,395	1,010
KANSAS	CRD3	376	355	388	460	469	480	427	430	359	311
MINNESOTA	CRD7	1,049	1,168	1,398	1,573	1,761	1,815	1,628	1,380	1,033	746
MISSOURI	CRD2	546	553	731	865	1,000	879	764	638	464	392
MONTANA	CRD2	180	192	239	254	284	300	320	301	243	210
NEBRASKA	CRD3	564	631	790	852	978	965	892	827	623	541
NORTH DAKOTA	CRD9	440	452	485	608	579	653	704	557	402	347
		1985 Dollars									
ARKANSAS	CRD6	1,047	1,127	1,295	1,312	1,454	1,477	1,232	902	788	610
IOWA	CRD1	2,987	2,862	3,152	3,239	3,123	2,665	2,172	1,696	1,395	1,010
KANSAS	CRD3	624	552	554	594	556	538	461	443	359	311
MINNESOTA	CRD7	1,744	1,815	1,996	2,033	2,089	2,036	1,756	1,423	1,033	746
MISSOURI	CRD2	908	859	1,043	1,118	1,186	986	824	658	464	392
MONTANA	CRD2	300	299	341	328	337	337	346	311	243	210
NEBRASKA	CRD3	938	981	1,128	1,102	1,160	1,083	963	853	623	541
NORTH DAKOTA	CRD9	731	702	692	786	687	733	760	574	402	347

Source: Economic Research Service, U.S. Department of Agriculture

APPENDIX TABLE 4(A):
ARKANSAS, CRD6, TOTAL TAXABLE VALUATION
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	CURRENT DOLLLARS (000's)				
ARKANSAS	68,266	174,724	172,374	175,367	177,491
CRITTENDEN	85,511	194,105	192,505	200,210	206,368
CROSS	42,813	104,567	105,140	109,840	109,096
LEE	28,528	63,307	64,063	63,820	65,239
LONOKE	64,736	158,724	162,177	164,422	171,693
MONROE	27,473	28,275	66,392	67,245	67,884
PHILLIPS	75,645	75,270	154,442	150,454	151,268
PRAIRIE	n.a.	70,493	70,704	72,064	72,926
ST. FRANCIS	117,306	124,764	126,373	128,405	133,217
WOODRUFF	26,546	57,619	58,333	58,731	59,609
TOTAL	536,824	1,051,848	1,172,503	1,190,558	1,214,791
	1985 DOLLARS (000's)				
ARKANSAS	80,967	196,040	185,965	180,847	177,491
CRITTENDEN	101,420	217,786	207,683	206,467	206,368
CROSS	50,778	117,324	113,430	113,273	109,096
LEE	33,836	71,030	69,114	65,814	65,239
LONOKE	76,780	178,088	174,964	169,560	171,693
MONROE	32,584	31,725	71,627	69,346	67,884
PHILLIPS	89,719	84,453	166,619	155,156	151,268
PRAIRIE	n.a.	79,093	76,279	74,316	72,926
ST. FRANCIS	139,130	139,985	136,337	132,418	133,217
WOODRUFF	31,485	64,649	62,932	60,566	59,609
TOTAL	636,698	1,180,173	1,264,950	1,227,763	1,214,791

n.a. - not available

Court ordered re-assessments occurred in 1981 in Prairie and St. Francis counties; 1982 in Arkansas, Crittenden, Cross, Lee, Lonoke, and Woodruff counties; and 1983 in Monroe, and Phillips counties.

APPENDIX TABLE 4(B):
IOWA, CRD1, TOTAL TAXABLE VALUATION
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	CURRENT DOLLARS (000's)				
BUENA VISTA	560,261	585,528	609,191	651,192	679,510
CHEROKEE	414,180	432,176	455,761	474,854	534,794
CLAY	605,458	632,690	637,185	670,609	669,728
DICKINSON	500,038	523,289	574,976	649,230	683,605
EMMET	342,613	356,077	356,637	371,989	403,893
LYON	369,332	384,986	393,330	411,696	427,510
O'BRIEN	486,636	502,681	522,760	547,813	563,607
OSCEOLA	293,816	305,488	305,143	320,493	330,749
PALO ALTO	402,038	418,168	445,248	464,498	479,289
PLYMOUTH	597,075	626,518	669,837	704,523	721,530
POCAHONTAS	461,522	481,014	494,704	515,021	524,431
SIOUX	683,125	723,543	743,164	777,915	827,320
TOTAL	5,716,094	5,972,158	6,207,936	6,559,833	6,845,966
	1985 Dollars (000's)				
BUENA VISTA	664,496	656,962	657,223	671,542	679,510
CHEROKEE	491,237	484,901	491,696	489,693	534,794
CLAY	718,102	709,878	687,424	691,566	669,728
DICKINSON	593,069	587,130	620,310	669,519	683,605
EMMET	406,355	399,518	384,756	383,614	403,893
LYON	438,045	431,954	424,342	424,562	427,510
O'BRIEN	577,173	564,008	563,977	564,932	563,607
OSCEOLA	348,480	342,757	329,202	330,509	330,749
PALO ALTO	476,836	469,184	480,354	479,014	479,289
PLYMOUTH	708,159	702,953	722,651	726,540	721,530
POCAHONTAS	547,387	539,697	533,709	531,116	524,431
SIOUX	810,219	811,815	801,759	802,225	827,320
TOTAL	6,779,557	6,700,757	6,697,404	6,764,830	6,845,966

APPENDIX TABLE 4(C):
KANSAS, CRD3, TOTAL TAXABLE VALUATION,
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	Current Dollars (000's)				
CLARK	54,170	56,503	56,987	51,765	49,425
FINNEY	224,635	262,061	283,571	285,374	273,568
FORD	119,537	128,889	122,093	127,469	120,173
GRANT	168,010	181,547	175,170	158,543	166,312
GRAY	55,061	56,555	46,848	46,650	46,001
HAMILTON	42,456	42,605	40,112	39,120	38,290
HASKELL	92,573	99,060	93,281	88,753	93,161
HODGEMAN	38,525	41,738	40,823	35,582	34,418
KEARNY	148,832	160,341	162,348	151,826	159,145
MEADE	63,970	77,565	80,615	78,189	90,996
MORTON	109,870	122,509	123,691	124,106	121,546
SEWARD	121,298	124,944	126,759	135,599	146,951
STANTON	63,390	64,664	60,435	58,220	59,013
STEVENS	213,558	236,622	212,680	206,198	213,889
TOTAL	1,515,885	1,655,603	1,625,413	1,587,394	1,612,888
	1985 Dollars (000's)				
CLARK	64,248	63,396	61,480	53,383	49,425
FINNEY	266,428	294,032	305,929	294,292	273,568
FORD	141,777	144,613	131,720	131,452	120,173
GRANT	199,268	203,696	188,981	163,497	166,312
GRAY	65,305	63,455	50,542	48,108	46,001
HAMILTON	50,355	47,803	43,275	40,343	38,290
HASKELL	109,796	111,145	100,636	91,527	93,161
HODGEMAN	45,692	46,830	44,042	36,694	34,418
KEARNY	176,522	179,903	175,148	156,571	159,145
MEADE	75,871	87,028	86,971	80,632	90,996
MORTON	130,311	137,455	133,444	127,984	121,546
SEWARD	143,865	140,187	136,753	139,836	146,951
STANTON	75,184	72,553	65,200	60,039	59,013
STEVENS	253,290	265,490	229,449	212,642	213,889
TOTAL	1,797,911	1,857,587	1,753,570	1,637,000	1,612,888

APPENDIX TABLE 4(D):
MINNESOTA, CRD7, TOTAL TAXABLE VALUATION
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	CURRENT DOLLARS (000's)				
COTTONWOOD	157,314	185,146	194,938	190,391	159,821
JACKSON	182,718	204,786	220,390	204,033	156,154
LINCOLN	58,809	69,171	72,603	71,160	65,531
LYON	151,630	176,676	191,091	191,598	175,902
MURRAY	121,365	139,294	145,947	138,449	116,566
NOBLES	173,499	189,778	194,917	182,698	160,055
PIPESTONE	76,663	84,638	83,529	77,929	69,005
REDWOOD	201,567	228,260	238,894	238,184	211,718
ROCK	98,850	109,342	108,417	105,746	88,553
TOTAL	1,222,415	1,387,091	1,450,725	1,400,188	1,203,303
	1985 DOLLARS (000's)				
COTTONWOOD	186,582	207,733	210,308	196,341	159,821
JACKSON	216,712	229,770	237,767	210,409	156,154
LINCOLN	69,751	77,610	78,327	73,384	65,531
LYON	179,840	198,231	206,157	197,586	175,902
MURRAY	143,944	156,288	157,454	142,775	116,566
NOBLES	205,778	212,931	210,286	188,407	160,055
PIPESTONE	90,926	94,964	90,115	80,365	69,005
REDWOOD	239,068	256,108	257,730	245,628	211,718
ROCK	117,240	122,682	116,965	109,051	88,553
TOTAL	1,449,841	1,556,316	1,565,109	1,443,944	1,203,303

APPENDIX TABLE 4(E):
MISSOURI, CRD2, TOTAL TAXABLE VALUATION
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	CURRENT DOLLARS (000's)				
ADAIR	69,259	69,915	70,718	77,430	126,587
CARROLL	77,029	74,528	73,225	71,260	85,211
CHARITON	68,819	66,600	66,017	65,745	88,872
GRUNDY	40,880	41,830	42,559	43,057	57,632
LINN	46,324	47,953	52,897	56,197	76,415
LIVINGSTON	57,592	58,617	58,609	59,295	82,898
MACON	55,224	56,148	57,002	61,117	89,427
MERCER	23,551	24,640	24,963	25,093	29,235
PUTNAM	26,231	26,757	27,241	26,879	28,845
RANDOLPH	120,178	140,418	154,348	161,688	356,989
SCHUYLER	19,132	19,287	19,174	19,434	27,575
SULLIVAN	25,863	25,960	26,440	27,184	32,198
TOTAL	630,082	652,653	673,193	694,379	1,081,884
	1985 DOLLARS (000's)				
ADAIR	82,144	78,445	76,294	79,850	126,587
CARROLL	91,360	83,620	78,998	73,487	85,211
CHARITON	81,623	74,725	71,222	67,800	88,872
GRUNDY	48,486	46,933	45,915	44,403	57,632
LINN	54,942	53,803	57,068	57,953	76,415
LIVINGSTON	68,307	65,768	63,230	61,148	82,898
MACON	65,498	62,998	61,496	63,027	89,427
MERCER	27,933	27,646	26,931	25,877	29,235
PUTNAM	31,111	30,021	29,389	27,719	28,845
RANDOLPH	142,537	157,549	166,518	166,741	356,989
SCHUYLER	22,691	21,640	20,686	20,041	27,575
SULLIVAN	30,675	29,127	28,525	28,034	32,198
TOTAL	747,307	732,277	726,272	716,078	1,081,884

APPENDIX TABLE 4(F):
MONTANA, CRD2, TOTAL TAXABLE VALUATION
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	Current Dollars (000's)				
BLAINE	35,218	33,607	30,372	34,212	44,289
CHOTEAU	29,716	28,682	29,163	30,209	30,540
GLACIER	47,745	44,961	42,749	45,796	48,824
HILL	43,714	44,742	43,825	45,368	49,529
LIBERTY	18,944	21,520	18,975	20,161	21,928
PONDERA	23,989	23,698	23,911	25,177	24,455
TETON	19,293	17,885	17,342	18,634	20,737
TOOLE	40,299	45,257	42,972	48,027	48,532
TOTAL	258,920	260,355	249,312	267,587	288,838
	1985 Dollars (000's)				
BLAINE	41,770	37,707	32,767	35,281	44,289
CHOTEAU	35,245	32,181	31,462	31,153	30,540
GLACIER	56,628	50,446	46,120	47,227	48,824
HILL	51,847	50,201	47,280	46,786	49,529
LIBERTY	22,468	24,145	20,471	20,791	21,928
PONDERA	28,452	26,589	25,796	25,964	24,455
TETON	22,882	20,067	18,709	19,216	20,737
TOOLE	47,797	50,778	46,360	49,528	48,532
TOTAL	307,091	292,118	268,969	275,949	288,838

APPENDIX TABLE 4(G):
NEBRASKA, CRD3, TOTAL TAXABLE VALUATION
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	CURRENT DOLLARS (000's)				
ANTELOPE	296,322	302,796	318,982	320,498	321,654
BOONE	250,570	258,590	266,530	269,847	270,694
BURT	287,904	288,291	303,980	302,076	296,821
CEDAR	279,260	298,214	308,852	313,641	310,653
CUMING	351,506	357,814	388,924	395,123	392,748
DAKOTA	307,360	321,769	334,026	327,987	321,850
DIXON	190,668	194,131	200,658	202,627	202,581
KNOX	269,590	276,761	297,901	299,576	291,048
MADISON	670,503	692,301	781,057	799,458	807,791
PIERCE	239,086	247,311	260,078	264,074	263,070
STANTON	198,414	205,398	217,071	221,639	224,369
THURSTON	141,420	143,151	145,650	146,290	145,271
WAYNE	268,405	244,015	260,508	263,277	260,820
TOTAL	3,751,008	3,830,542	4,084,217	4,126,113	4,109,370
	1985 DOLLARS (000's)				
ANTELOPE	351,452	359,130	344,132	330,514	321,654
BOONE	297,188	306,700	287,545	278,280	270,694
BURT	341,468	341,927	327,948	311,516	296,821
CEDAR	331,215	353,696	333,204	323,442	310,653
CUMING	416,903	424,384	419,589	407,471	392,748
DAKOTA	364,543	381,633	360,363	338,237	321,850
DIXON	226,141	230,248	216,479	208,959	202,581
KNOX	319,746	328,252	321,389	308,938	291,048
MADISON	795,248	821,102	842,640	824,441	807,791
PIERCE	283,567	293,322	280,584	272,326	263,070
STANTON	235,328	243,612	234,186	228,565	224,369
THURSTON	167,731	169,784	157,134	150,862	145,271
WAYNE	318,341	289,413	281,048	271,504	260,820
TOTAL	4,448,872	4,543,203	4,406,241	4,255,054	4,109,370

APPENDIX TABLE 4(H):
NORTH DAKOTA, CRD9, TOTAL TAXABLE VALUATION
BY COUNTY, 1981-1985

	1981	1982	1983	1984	1985
	Current Dollars (000's)				
DICKEY	11,739	12,672	12,569	13,115	12,027
LAMOURE	12,122	12,626	12,228	13,265	12,015
LOGAN	6,363	6,674	6,050	6,564	6,139
MCINTOSH	7,233	9,816	9,300	10,162	9,573
RANSOME	9,948	10,826	11,448	11,596	11,045
RICHLAND	26,829	29,228	30,491	30,666	28,803
SARGENT	9,076	9,567	10,090	10,069	9,228
TOTAL	83,310	91,409	92,176	95,437	88,830
	1985 Dollars (000's)				
DICKEY	13,923	14,218	13,560	13,525	12,027
LAMOURE	14,377	14,166	13,192	13,680	12,015
LOGAN	7,547	7,488	6,527	6,769	6,139
MCINTOSH	8,579	11,014	10,033	10,480	9,573
RANSOME	11,799	12,147	12,351	11,958	11,045
RICHLAND	31,820	32,794	32,895	31,624	28,803
SARGENT	10,765	10,734	10,886	10,384	9,228
TOTAL	98,810	102,561	99,444	98,419	88,830

APPENDIX TABLE 5(A):
ARKANSAS PROPERTY TAX DELINQUENCIES AND TOTAL NET LEVIES,
CRD6, BY COUNTY, 1978-1985

	1978	1979	1980	1981	1982	1983	1984	1985
	DELINQUENCIES ($)							
ARKANSAS	n.a.	48,818	163	1,319	2,107	15,265	22,785	27,275
CRITTENDEN	31,532	20,226	38,019	34,024	45,578	46,461	57,531	56,519
CROSS	17,760	24,126	34,068	31,369	45,909	49,635	47,880	76,352
LEE	17,979	17,985	28,255	25,480	38,775	50,272	46,092	56,149
LONOKE	18,953	24,733	24,255	42,298	47,270	72,689	61,212	n.a.
MONROE	17,404	19,554	21,550	21,657	41,599	37,989	32,624	55,958
PHILLIPS	50,155	47,747	51,152	58,981	64,166	99,067	92,031	115,926
PRAIRIE	6,892	4,991	4,976	16,501	13,362	17,504	22,699	36,467
ST. FRANCIS	18,074	19,038	38,100	21,942	72,157	83,417	87,670	86,513
WOODRUFF	10,222	6,348	8,483	10,506	10,776	29,087	33,418	51,177
TOTAL	188,971	23,356	249,021	264,077	381,699	501,386	503,942	562,336
	NET LEVY ($000's)							
ARKANSAS	n.a.	2,249	2,328	2,638	2,633	2,993	3,079	3,247
CRITTENDEN	2,974	3,111	3,221	3,303	3,401	3,746	3,760	3,818
CROSS	1,398	1,444	1,520	1,552	1,633	1,798	1,800	1,904
LEE	781	852	866	884	1,065	1,158	1,166	1,096
LONOKE	1,606	1,754	1,851	1,967	2,073	2,271	2,284	n.a.
MONROE	750	766	777	820	918	954	1,045	1,067
PHILLIPS	1,929	1,956	2,096	2,168	2,189	2,191	2,396	2,514
PRAIRIE	861	891	921	937	1,035	1,060	1,060	1,129
ST. FRANCIS	1,599	1,715	1,731	1,755	2,067	1,866	1,881	2,011
WOODRUFF	831	846	856	875	905	1,038	1,050	1,117
TOTAL	12,732	15,588	16,174	16,903	17,924	19,080	19,525	17,907

n.a. - not available

Data for 1977-1983 was collected from county audit reports provided by the Legislative Joint Auditing Committee. County officials provided 1984 data. There is an eleven month lag between the end of the tax year and the end of the collection period. For instance, taxes for the 1984 tax year are actually delinquent as of October 1985.

Unless otherwise indicated, the calculation of a delinquency percentage uses the original tax charge, adjusted by added taxes and errors and court orders. However, this adjusted original tax charge is slightly inconsistent across counties due to the separation of a disabled veterans credit from errors and court orders for several counties in several years. Such distortions would be small; therefore, the counties are not specified.

Real estate taxes account for roughly 65% of all property tax collections on a statewide average

The 1984 delinquency percentage for Crittenden, Lee, Monroe, Phillips, Prairie, and St. Francis counties is calculated using the original, unadjusted tax charge.

APPENDIX TABLE 5(B):
IOWA, PROPERTY TAX DELINQUENCIES AND TOTAL NET LEVIES,
CRD1, BY COUNTY, 1978-1985

	1978	1979	1980	1981	1982	1983	1984	1985
	DELINQUENCIES ($)							
BUENA VISTA	n.a.	20,939	38,935	51,199	53,714	94,522	140,980	203,824
CHEROKEE	n.a.	45,483	73,915	115,645	105,679	124,716	207,790	237,555
CLAY	n.a.	33,385	58,158	89,766	149,282	191,451	246,720	296,374
DICKINSON	n.a.	59,518	131,212	229,458	284,770	330,495	266,576	353,106
EMMET	n.a.	22,346	59,151	62,314	104,120	137,946	171,175	182,759
LYON	n.a.	6,094	11,154	3,936	7,254	17,917	20,345	56,933
O'BRIEN	n.a.	n.a.	22,475	19,296	32,873	32,948	39,773	97,977
OSCEOLA	n.a.	22,702	24,359	22,339	34,959	29,792	43,126	108,730
PALO ALTO	n.a.	25,701	76,697	82,251	112,356	99,906	123,673	207,955
PLYMOUTH	n.a.	40,189	99,297	85,753	103,892	119,247	180,268	232,562
POCAHONTAS	n.a.	30,160	68,755	70,801	81,167	89,593	127,815	237,761
SIOUX	n.a.	39,780	42,996	53,573	76,507	113,528	233,762	256,813
TOTAL	n.a.	346,297	707,104	886,331	1,146,573	1,382,061	1,802,003	2,472,349
	NET LEVY ($000's)							
BUENA VISTA	n.a.	7,478	7,946	9,143	9,424	9,846	10,521	10,958
CHEROKEE	n.a.	5,985	6,372	6,685	7,189	7,380	7,931	8,306
CLAY	n.a.	7,258	8,078	8,888	9,631	10,696	10,965	11,577
DICKINSON	n.a.	6,200	6,979	8,137	8,955	9,552	9,837	10,636
EMMET	n.a.	5,079	5,377	5,824	6,467	6,446	6,766	6,670
LYON	n.a.	3,809	4,462	4,920	5,580	5,780	5,813	5,993
O'BRIEN	n.a.	n.a.	6,243	7,147	7,305	7,488	7,799	8,097
OSCEOLA	n.a.	3,339	3,748	4,380	4,600	4,805	4,901	5,178
PALO ALTO	n.a.	4,759	5,478	5,917	6,420	6,323	6,441	7,073
PLYMOUTH	n.a.	8,038	8,487	8,933	9,531	9,855	10,360	11,181
POCAHONTAS	n.a.	5,200	5,827	6,211	6,493	6,686	6,763	7,161
SIOUX	n.a.	8,464	9,148	10,303	11,251	12,077	12,915	12,406
TOTAL	n.a.	65,607	78,144	86,486	92,847	96,934	101,011	105,237

n.a. - not available

All amounts were obtained from county audit reports of the State Auditor or were spot checked with them for consistency, except for those for O'Brien county and for Lyon and Cherokee county in 1985. There, data was obtained from county reports, no audit reports were available. There is a one year and six month lag between the tax year and the final compilation of a delinquent tax list. For example, taxes for 1983 are actually delinquent as of June 1985. The calculation of a delinquency percentage sues the original tax assessment plus any adjustments. However, abated taxes are not subtracted from this adjusted amount, which may slightly understate delinquency percentages.

APPENDIX TABLE 5(C):
KANSAS PROPERTY TAX DELINQUENCIES AND TOTAL NET LEVIES,
CRDJ, BY COUNTY, 1978-1985

	1978	1979	1980	1981	1982	1983	1984	1985
	DELINQUENCIES ($)							
CLARK	28,699	13,267	26,834	29,148	42,179	52,805	51,806	24,670
FINNEY	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
FORD	261,313	241,802	336,019	522,209	689,829	929,189	1,142,301	1,098,223
GRANT	31,892	56,464	66,078	87,234	58,418	49,963	62,734	56,396
GRAY	60,128	115,196	162,801	183,601	184,875	177,466	234,846	239,688
HAMILTON	55,480	38,324	55,229	n.a	n.a	87,657	75,411	79,968
HASKELL	35,087	40,317	29,888	28,621	40,288	57,277	58,517	88,475
HODGEMAN	19,458	36,726	24,846	29,657	52,784	34,140	39,616	47,587
KEARNY	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
MEADE	70,017	30,982	51,037	53,295	78,651	99,026	117,532	72,948
MORTON	36,029	37,764	61,621	57,355	50,438	30,466	35,437	61,086
SEWARD	171,035	174,220	139,176	140,575	188,776	192,631	201,958	257,394
STANTON	n.a	n.a	n.a	79,909	71,640	77,643	87,382	n.a
STEVENS	23,783	48,271	40,414	48,679	47,568	48,691	44,539	57,182
TOTAL	792,921	833,333	993,943	1,260,283	1,505,446	1,836,954	2,152,079	2,083,617
	NET LEVY ($000's)							
CLARK	2,141	2,287	2,531	3,100	3,401	3,543	3,500	3,627
FINNEY	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
FORD	10,979	11,625	12,632	13,355	14,371	15,722	16,388	16,741
GRANT	5,905	6,273	6,674	7,150	7,394	8,190	7,841	8,811
GRAY	3,579	3,801	4,039	4,309	4,680	5,114	5,061	5,188
HAMILTON	2,184	2,336	2,629	n.a	n.a	3,164	3,195	3,148
HASKELL	3,813	4,031	4,038	4,472	5,674	5,904	5,520	5,859
HODGEMAN	2,162	2,432	2,535	2,936	3,278	3,414	3,702	3,837
KEARNY	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
MEADE	3,536	3,481	3,645	4,037	4,443	5,001	5,294	5,324
MORTON	3,714	3,814	3,975	4,516	4,849	4,913	5,289	6,170
SEWARD	7,704	8,335	8,753	9,628	9,935	11,745	12,239	12,434
STANTON	n.a	n.a	n.a	3,648	3,286	3,769	4,083	n.a
STEVENS	5,530	6,110	6,518	7,265	6,893	7,607	7,183	7,523
TOTAL	51,252	54,530	57,974	64,421	68,210	78,092	79,300	78,667

n.a. - not available

Unless otherwise indicated, the data was obtained from county tax accounts. There is approximately a ten month lag between the end of the tax year and the delinquency data shown. For example, taxes for 1984 are shown delinquent as of (approximately) September 1985, the time of tax sale.

Unless otherwise indicated, the delinquency percentage is calculated using the net adjusted tax roll which is equal to original charges plus added taxes, minus errors and abated taxes.

In Clark and Grant counties the delinquency percentage is calculated using the original tax charge. In Clark county for the years 1980-1983, delinquency data may include amounts under protest by the railroad. In Gray county tax collections include advance taxes. In Stanton county the data was obtained from audit reports.

APPENDIX TABLE 5(D):
MINNESOTA, PROPERTY TAX DELINQUENCIES AND TOTAL NET LEVIES,
CRD7, BY COUNTY, 1978-1985

	1978	1979	1980	1981	1982	1983	1984	1985
	DELINQUENCIES ($)							
COTTONWOOD	n.a.	n.a.	n.a.	40,003	50,767	112,892	131,612	200,607
JACKSON	n.a.	n.a.	n.a.	20,150	42,443	74,145	90,706	149,526
LINCOLN	n.a.	n.a.	n.a.	50,174	62,940	89,105	129,552	194,676
LYON	n.a.	n.a.	n.a.	227,481	229,710	311,015	834,254	344,768
MURRAY	n.a.	n.a.	n.a.	29,305	41,315	78,844	91,782	182,262
NOBLES	n.a.	n.a.	n.a.	46,129	39,091	119,875	128,035	190,194
PIPESTONE	n.a.	n.a.	n.a.	39,528	47,782	112,136	113,711	188,486
REDWOOD	n.a.	n.a.	n.a.	49,554	34,208	99,694	101,101	154,620
ROCK	n.a.	n.a.	n.a.	37,797	45,030	49,336	51,371	161,223
TOTAL	n.a.	n.a.	n.a.	540,121	593,286	1,047,042	1,672,124	1,766,362
	NET LEVY ($000's)							
COTTONWOOD	n.a.	n.a.	n.a.	5,715	5,641	6,641	6,927	8,359
JACKSON	n.a.	n.a.	n.a.	6,717	6,063	7,415	7,559	9,345
LINCOLN	n.a.	n.a.	n.a.	239	2,248	2,874	3,160	3,894
LYON	n.a.	n.a.	n.a.	6,893	8,204	8,185	8,875	11,122
MURRAY	n.a.	n.a.	n.a.	4,186	3,443	4,638	4,589	5,879
NOBLES	n.a.	n.a.	n.a.	7,688	7,818	9,221	9,849	11,188
PIPESTONE	n.a.	n.a.	n.a.	3,294	3,185	4,313	4,738	5,094
REDWOOD	n.a.	n.a.	n.a.	7,079	6,842	9,063	9,191	11,044
ROCK	n.a.	n.a.	n.a.	3,780	3,464	4,485	4,670	5,374
TOTAL	n.a.	n.a.	n.a.	43,591	46,908	56,834	59,558	71,299

n.a. - not available

APPENDIX TABLE 5(E):
MISSOURI PROPERTY TAX DELINQUENCIES AND TOTAL NET LEVIES,
CRD2, BY COUNTY, 1978-1985

	1978	1979	1980	1981	1982	1983	1984	1985
	DELINQUENCIES ($)							
ADAIR	90,786	111,711	114,680	152,784	163,008	156,532	n.a.	142,208
CARROLL	55,456	51,520	70,240	14,099	124,281	n.a.	n.a.	129,401
CHARITON	38,737	43,492	43,782	56,117	66,607	84,038	89,676	101,225
GRUNDY	148,003	107,067	136,845	138,881	153,391	150,210	n.a.	148,171
LINN	99,274	98,130	118,653	182,340	137,110	182,340	n.a.	223,863
LIVINGSTON	151,154	166,885	176,046	225,991	270,958	260,022	n.a.	224,614
MACON	86,852	94,668	92,476	103,403	128,079	128,923	n.a.	145,657
MERCER	95,490	72,606	111,560	108,205	152,934	184,025	176,947	n.a.
PUTNAM	122,487	117,981	113,281	271,239	177,752	159,442	143,902	162,650
RANDOLPH	146,881	148,003	171,274	204,860	221,131	210,868	228,614	241,766
SCHUYLER	40,116	41,091	46,968	62,720	83,100	71,006	68,808	68,933
SULLIVAN	100,553	91,598	85,398	100,404	145,407	151,164	n.a.	167,741
TOTAL	1,175,789	1,144,752	1,281,203	1,621,043	1,823,758	1,738,570	707,947	1,756,229
	NET LEVY ($000's)							
ADAIR	3,250	3,364	3,491	3,760	3,600	3,551	n.a.	3,443
CARROLL	3,076	3,163	3,488	3,708	4,099	n.a.	n.a.	3,405
CHARITON	2,728	2,910	3,086	3,216	3,537	3,474	3,168	3,223
GRUNDY	2,093	2,147	224	2,308	2,340	2,401	n.a.	2,150
LINN	2,472	2,520	2,939	3,278	2,961	3,278	n.a.	3,428
LIVINGSTON	2,849	3,080	3,204	3,304	3,499	3,556	n.a.	2,924
MACON	2,673	2,830	3,039	3,132	3,217	3,216	n.a.	3,159
MERCER	1,181	1,199	1,289	1,313	1,395	1,425	1,571	n.a.
PUTNAM	1,368	1,470	1,542	1,628	1,615	1,682	1,589	1,535
RANDOLPH	3,882	4,161	4,510	5,200	5,675	6,381	6,498	6,987
SCHUYLER	1,027	1,095	1,145	1,226	1,269	1,270	1,164	1,131
SULLIVAN	1,344	1,389	1,383	1,455	1,484	1,608	n.a.	1,447
TOTAL	27,947	29,333	29,344	33,533	34,697	31,850	13,992	32,837

n.a. - not available

For 1977-1983, data was obtained from county audit reports by the State Auditor. Although the collection year and tax year are the same, amounts reflect delinquency as of the end of February in the year following.

Delinquency percentages are calculated using total current taxes from the audit report, less abatements. For 1984, delinquency percentages are calculated using a comparable total current tax figure except for interest charges included in the above. Differences should be negligible.

APPENDIX TABLE 5(F):
MONTANA PROPERTY TAX DELINQUENCIES AND TOTAL NET LEVIES,
CRD2, BY COUNTY, 1978-1985

	1978	1979	1980	1981	1982	1983	1984	1985
	DELINQUENCIES ($)							
BLAINE	n.a.	n.a.	145084	124392	353434	299000	224667	241286
CHOTEAU	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GLACIER	91160	84017	339285	250336	166734	604798	382495	352628
HILL	138900	225400	380500	444000	606800	522100	n.a.	687800
LIBERTY	12988	21876	49913	n.a.	36178	46427	113354	64616
PONDERA	n.a.	n.a.	n.a.	149699	136777	277947	472601	624517
TETON	155358	114620	230886	384048	452197	292947	283536	412071
TOOLE	20477	53963	53883	133236	205204	241016	176812	1037070
TOTAL	418883	499876	1199551	1485711	1957324	2284235	1653465	3419988
	NET LEVY ($000's)							
BLAINE	n.a.	n.a.	4317	5293	6277	6485	6474	6777
CHOTEAU	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GLACIER	4143	4566	4931	6061	7155	9108	8978	8949
HILL	6039	7065	7534	8987	9393	11084	n.a.	12024
LIBERTY	1829	2006	2054	n.a.	2720	3158	3114	3280
PONDERA	n.a.	n.a.	n.a.	3191	3352	3328	5120	5581
TETON	3522	3473	3940	4224	4386	4694	4580	4830
TOOLE	3250	4027	4490	4792	6256	7348	7621	6647
TOTAL	18785	21139	27268	32552	39541	45208	35889	48091

n.a. - not available

Data was obtained from County Treasurers, and represents delinquency after the end of the collection period as of (approximately) June of the year following the tax levy, except in Toole county for 1983 where the delinquency is as of September, 1984.

In Teton and Liberty counties net levy is equal to the tax charge adjusted by added taxes and abatements. In all other counties the original tax charge is reported.

APPENDIX TABLE 5(G):
NEBRASKA PROPERTY TAX DELINQUENCIES AND TOTAL NET LEVIES,
CRD3, BY COUNTY, 1978-1985

	1978	1979	1980	1981	1982	1983	1984	1985
	DELINQUENCIES ($)							
ANTELOPE	46,161	44,036	83,883	75,755	145,675	134,590	284,736	683,283
BOONE	18,638	20,251	24,082	46,456	70,785	84,913	66,974	258,432
BURT	70,202	75,954	15,025	87,725	120,277	224,008	1,086,729	792,938
CEDAR	46,463	48,366	68,059	76,574	120,916	170,872	303,209	754,170
CUMING	9,623	6,145	11,135	16,230	31,685	42,648	79,374	318,359
DAKOTA	163,876	181,676	206,196	172,039	229,363	240,529	284,734	755,541
DIXON	42,676	55,345	125,530	108,522	181,333	207,860	312,749	854,027
KNOX	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
MADISON	66,506	99,526	120,983	139,414	166,350	189,590	302,564	650,117
PIERCE	32,499	53,085	41,968	65,387	78,988	101,187	127,648	362,733
STANTON	30,850	46,670	47,093	66,240	79,360	98,415	102,007	297,425
THURSTON	40,528	54,546	81,639	120,011	129,289	159,116	215,507	481,484
WAYNE	21,867	28,803	27,439	36,012	65,947	60,291	103,750	237,042
TOTAL	525,090	650,116	745,067	888,154	1,203,508	1,494,516	2,918,271	5,503,836
	NET LEVY ($000's)							
ANTELOPE	2,844	3,505	3,657	3,620	4,160	4,797	5,279	5,708
BOONE	2,411	2,921	3,075	3,389	3,802	3,847	4,455	4,607
BURT	3,690	4,189	4,714	4,964	5,291	5,669	5,901	6,048
CEDAR	3,133	3,684	4,124	4,330	4,703	4,908	5,165	5,387
CUMING	3,428	3,241	4,088	4,405	5,132	5,498	5,945	6,218
DAKOTA	4,161	4,836	5,680	5,432	5,352	5,653	6,176	6,856
DIXON	2,286	2,739	3,250	3,355	3,652	3,772	4,172	4,409
KNOX	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
MADISON	7,841	8,515	8,870	9,305	10,091	11,382	12,357	12,427
PIERCE	2,860	3,043	3,254	3,240	3,428	3,881	4,144	4,184
STANTON	2,203	2,331	2,613	2,826	2,888	3,311	3,539	3,512
THURSTON	2,025	2,419	2,744	2,729	3,002	3,161	3,483	3,275
WAYNE	2,768	3,263	3,578	3,681	3,578	4,104	4,912	5,001
TOTAL	37,971	42,312	47,482	48,583	51,831	56,498	61,535	64,182

(1) - omitted

Data obtained from county audit reports by the Auditor of Public Accounts, except for 1985 delinquencies in Dakota, Knox, Madison, Stanton, Thurston, and Wayne counties and 1983 delinquencies in Pierce county. These amounts plus all data for 1984 were obtained from county treasurers.

Data for the 1977-1983 tax years represents delinquency as of June 30 in the second year after the tax. For example, taxes levied in 1983 are due by September 1984, but record of delinquency is not available until the period ending June 30, 1985. This understates delinquencies for 1983 and prior years.

For 1984, the delinquency period is recorded as of November, 1985. This is eight months shorter than the prior year's collection period, and overstates delinquency in comparison to prior years.

Unless otherwise indicated, amounts include real estate and personal property. Net levy is the corrected certified tax. Data obtained from counties may differ slightly, due to local treatment of tax corrections for 1984.

Data for Cuming, Cedar and Pierce counties for 1983 and 1984 include real estate taxes only. However, real estate taxes are approximately 95% of collections from real and personal property taxes.

Net levies for Cedar, Cuming, Dakota, Pierce and Stanton counties for 1984 are equal to the original tax charge from the assessor. This should cause only minor discrepancies.

APPENDIX TABLE 5(H):
NORTH DAKOTA, PROPERTY TAX DELINQUENCIES AND TOTAL NET LEVIES,
CRD9, BY COUNTY, 1978-1985

	1978	1979	1980	1981	1982	1983	1984	1985
	DELINQUENCIES ($)							
DICKEY	20,450	21,252	21,451	23,192	23,176	25,401	27,742	28,199
LAMOURE	19,130	20,472	20,474	21,583	21,350	22,914	23,715	26,165
LOGAN	10,129	10,129	111	12,728	13,470	13,711	14,643	15,526
MCINTOSH	n.a.	n.a.	n.a.	n.a.	14,090	16,834	18,005	20,008
RANSOME	21,559	21,021	22,766	24,813	25,517	25,898	27,602	30,063
RICHLAND	n.a.	n.a.	62,368	68,359	72,333	76,533	80,818	84,934
SARGENT	15,986	16,573	17,896	19,454	19,355	22,118	22,759	25,670
TOTAL	87,254	89,448	145,067	170,129	189,291	203,409	215,285	230,564
	NET LEVY ($000's)							
DICKEY	92,023	87,134	109,400	115,960	166,864	185,425	241,358	256,610
LAMOURE	42,087	51,180	90,087	79,858	91,803	91,656	90,118	180,539
LOGAN	64,823	68,877	78,374	100,552	115,840	102,834	109,822	164,577
MCINTOSH	(1)	(1)	(1)	(1)	87,361	99,320	99,029	112,043
RANSOME	122,886	105,107	154,807	156,322	186,274	132,082	143,531	264,550
RICHLAND	(1)	(1)	286,895	369,136	332,734	306,130	307,109	356,722
SARGENT	59,149	51,377	75,162	89,490	90,970	95,108	118,346	154,018
TOTAL	380,968	363,675	794,725	911,318	1.071,846	1,012,555	1,109,313	1,489,059

n.a. - not available
(1) - omitted

Data obtained from county auditors. There is a ten month lag between the end of the tax year and the final date for collections. The amounts shown represent delinquency when the final delinquent tax list is compiled in December of the year following the tax year.

Unless otherwise indicated, the original tax charge is reported. Delinquent amounts are found by subtracting collections from the original charge, which results in slight errors in the delinquent amounts and in the percent delinquent due to abatements and added taxes over the collection year. However, these tax correction amounts are very small and should not cause significant distortions of the data.

Original charges for La Moure county do not include protest taxes by the railroad for 1981-1984. Original charges for Ransome county exclude the mobile home tax for the years 1982-1984, but the delinquent amounts are the true figures, not found by subtracting collections. For Dickey and McIntosh counties, delinquent amounts are also true figures. In McIntosh, the original tax charge is corrected by tax adjustments.

APPENDIX B

Economic Impacts: A Case Study of Southwest Minnesota

Southwestern Minnesota typifies that portion of rural America severely affected by agriculture's financial problems. This appendix offers estimates of the impact that declining farm incomes have had on the rural business community. The estimates are specific to southwest Minnesota and do not take into account impacts which might occur outside the region's boundaries in trading centers such as Mankato, Minnesota; Sioux Falls, South Dakota; or in Minneapolis-St. Paul. But, these estimated regional impacts are expected to be typical of those which would occur in other rural areas in the Upper Midwest not containing a major trade center.

The economy of Minnesota Crop Reporting District (CRD) 7 was the focus of the study. A brief overview of the characteristics of the counties in that region is given in table B1. All nine counties in the region are among those delineated by USDA's Economic Research Service as being agriculturally dependent. Six counties--Cottonwood, Jackson, Lincoln, Murray, Redwood and Rock--were among the nation's most dependent on agricultural income. Murray County where more than 60 percent of all labor and proprietor's income came from agriculture, ranked 19th in the U.S. in degree of dependency on agriculture.

Net farm income peaked in the region at more than $372 million in 1973. By 1983, it had slumped to only $141 million--over $80 million less than the region's residents

received from transfer payments such as social security and veterans benefits. (figure B1) Farm management records compiled at the University of Minnesota present a similar picture. The average incomes of those participating in the survey (generally thought to be among the region's better farmers), reached more than $62,000 in 1978. By 1981 incomes for those same farmers averaged $2,271; in 1984, $9,872; and in 1985, $5,487.

This massive drop in farm income, coupled with the enormous loss of wealth due to the declining land values noted earlier in this report, is having important effects outside the agricultural sector. Local merchants who sell to farm families have lost sales. That loss in sales has forced cutbacks in downtown employment and caused some businesses to close, reinforcing the region's cycle of decline. Decreased business activity also depresses downtown property values, further adding to the stress on local government finances.

This appendix provides estimates of the impact that lower farm incomes have had on incomes, employment, and property values in the off-farm, commercial sector. These main street impacts of changes in farm income are found using a simple econometric model based on data from CRD 7 in Minnesota. That model and the structural relationships which support it are described in detail below.

62-720 O - 86 - 5

EXISTING STUDIES

Studies of agriculture's impact on local, non-farm economic activity have yielded widely different results. Sources of those differences include the region of the country and the type of agriculture studied, the size of the geographic area considered, and the non-agricultural sectors included in the analysis.

When studies are limited to local, county level impacts, and when only changes in employment and income of those firms providing goods and services to households, local farmers, and other local businesses are considered, multipliers tend to be relatively low. Bender, for example, in a 1975 study of 13 Western States found that on average an increase (or decrease) of 3 jobs in agriculture was required to increase (or decrease) commercial sector employment by one. In general, multipliers will be larger in multicounty regions that include a major trade center, and smaller in counties where firms and households purchase more of their raw materials, goods, and services from outside the local economy.

Studies which relate agricultural employment, or number of farmers, to downtown employment have a common problem which reduces their usefulness in policy analysis. These studies make the implicit assumption that all farmers have similar incomes and purchasing habits. Employment multipliers derived from the relationship between the number of farmers in a region and the number of workers employed by the commercial sector do not allow one to distinguish between the impact of the loss of a farm household fully dependent on agricultural income and the

part-time farmer who quits farming but remains employed in his primary job. Such methods also fail to take full account of the impact of changes in farm family income.

THE MODEL

This study takes a slightly different approach to estimating the agricultural sector's impact on the local economy. Instead of focussing on the relationship between number of farmers and local business activity, it examines the relationship between changes in farm income and employment, income and property values in the local commercial sector. Regression analysis is used to estimate the change in agricultural income necessary to produce a $1000 change in net income in the non-agricultural sector, and the number of off-farm jobs lost when farm income declines.

The non-agricultural firms in the local economy are divided into four rather broad sectors--manufacturing, consumer goods and services, producer goods and services, and distributive services. Manufacturing income and employment are assumed to be exogenous, or independent of the level of farm income in the region. But, manufacturing activity is assumed to help determine levels of employment and income in the non-farm sectors of the local economy.

The three commercial sectors are the focus of the modeling efforts. The consumer goods and services sector is defined to include those enterprises which sell products or services primarily to households. Included in this sector are all retail trade establishments (except those selling building materials and farm equipment), passenger transportation, and personal services

provided to households, such as medical care. A list of the actual sectors and SIC codes included in each of the three nonbasic sectors is given in table B2.

The producer goods sector contains those activities which primarily serve businesses and agriculture. Agricultural services, sales of building materials and farm equipment, as well as business services, legal services, and the finance, insurance and real estate sector are its major components.

The distributive services sector includes wholesaling activities--including grain elevators--as well as most of the transportation, communications and utilities sector. Firms in this sector provide services to both consumers and producers which cannot be separated out at the two digit SIC code level.

Income and employment in the consumer goods sector were hypothesized to depend upon the national demand for the products and services produced in the region. Increased demand for these exportable goods, primarily raw agricultural products and manufactured goods, increases the incomes of local farmers and those employed in manufacturing. This income from outside the region, often termed basic income, is then spent on other locally provided goods and services--groceries and auto repair for example--increasing incomes and creating new jobs in those nonbasic, or service sectors as well. Those funds then flow through the community as they are respent, and respent again.

Not all of the increased income is spent locally, however. Regional trade centers compete with local merchants for a share of the additional purchases, and the cost of materials purchased

TABLE 2. THE COMPOSITION OF THE CONSUMER, PRODUCER, AND DISTRIBUTION SECTORS, BY SIC CODE.

CONSUMER GOODS AND SERVICES:

Retail Trade	(53-59)
except Building Materials and Farm Equipment	(52)
Hotels	(71)
Personal Services	(72)
Auto Repair	(75)
Misc. Repair	(76)
Motion Pictures	(78)
Amusements	(79)
Health Services	(80)
Education	(82)
Social Services	(83)
Museums	(84)
Private Households	(85)
Local Passenger Transportation	(41)

PRODUCER GOODS AND SERVICES:

Building Materials and Farm Equipment	(52)
Agricultural Services	(7)
Finance Insurance and Real Estate	(60-67)
Miscellaneous Business Services	(93)
Legal Services	(99)
Membership Orgranizations	(103)
Miscellaneous Services	(89)
Air Transportation	(45)

DISTRIBUTIVE SERVICES:

Wholesale Trade	(50-51)
Transportation	(40,42,44,46,47)
Communication	(48)
Utilities	(49)

from outside the region drains off a portion of each dollar spent at each round of spending. The greater the portion leaving the local economy, the leakage, the lower the impact of any change in basic income on the community.

Reflecting the nature of the economic base model used, incomes and employment in the consumer goods and services sector were expected to depend on the income of the agricultural and manufacturing sectors. Before the equations were estimated, several changes were made to better represent the economy of southwest Minnesota.

First, transfer payments were included as an additional source of basic income. Social security, veterans benefits, and retirement programs are always a major source of outside income for the rural economy. Recently, as noted above, such payments have exceeded those from agriculture or manufacturing. Omitting them from the model could seriously bias estimates of impacts. A time variable was also included in the consumer goods model to reflect the increased tendency for households to shop outside the local economy in the regional trade centers.

The final change relates to the definition of farm income used to predict impacts in the consumer goods sector. Farm income is volatile, varying substantially from year to year even when times are generally considered to be good. As a result, most economists believed that farmers, like salesmen and others with variable incomes, do not base their consumption solely on the current year's income. Instead, farm households' consumption decisions are thought to be based on the household's expected or

permanent income--the households average annual income over the forseeable future. In this way the peaks and troughs associated with good and bad crop years are averaged out, and a more stable pattern of local expenditures for consumer goods results. In this study a moving average of net agricultural incomes for the current and 4 preceeding years was used to represent expected or average income. Table 3 and figure 2 show the effect of using the moving average to smooth the average farm income of those farmers reporting to the Southwest Minnesota Farm Management Association.

Sales of producer goods and services--inputs into the production of goods and services sold in the region--were hypothesized to depend on the level of business activity in the basic sectors of the economy. Net income from manufacturing and net current agricultural income were used as the key variables in both the income and employment estimating equations. Income and employment in the distributional services were estimated in the same manner, except that transfer payments were included as a determinant of income and employment in the distribution sector.

Downtown property values were assumed to depend on incomes in the consumer, producer, and distributive goods sectors. It was also anticipated, however, that adjustments would not be instantaneous, but rather occur over a period of time. To allow for time lags a 5 year moving average of income in the consumer goods sector was used to represent local business activity. Further, the form chosen for the estimating equation, a partial adjustment model in which only a fraction of the difference

APPENDIX TABLE B3: AVERAGE INCOME OF REPORTING FARMS, SOUTHWEST MINNESOTA FARM MANAGEMENT ASSOCIATION, 1960-1985

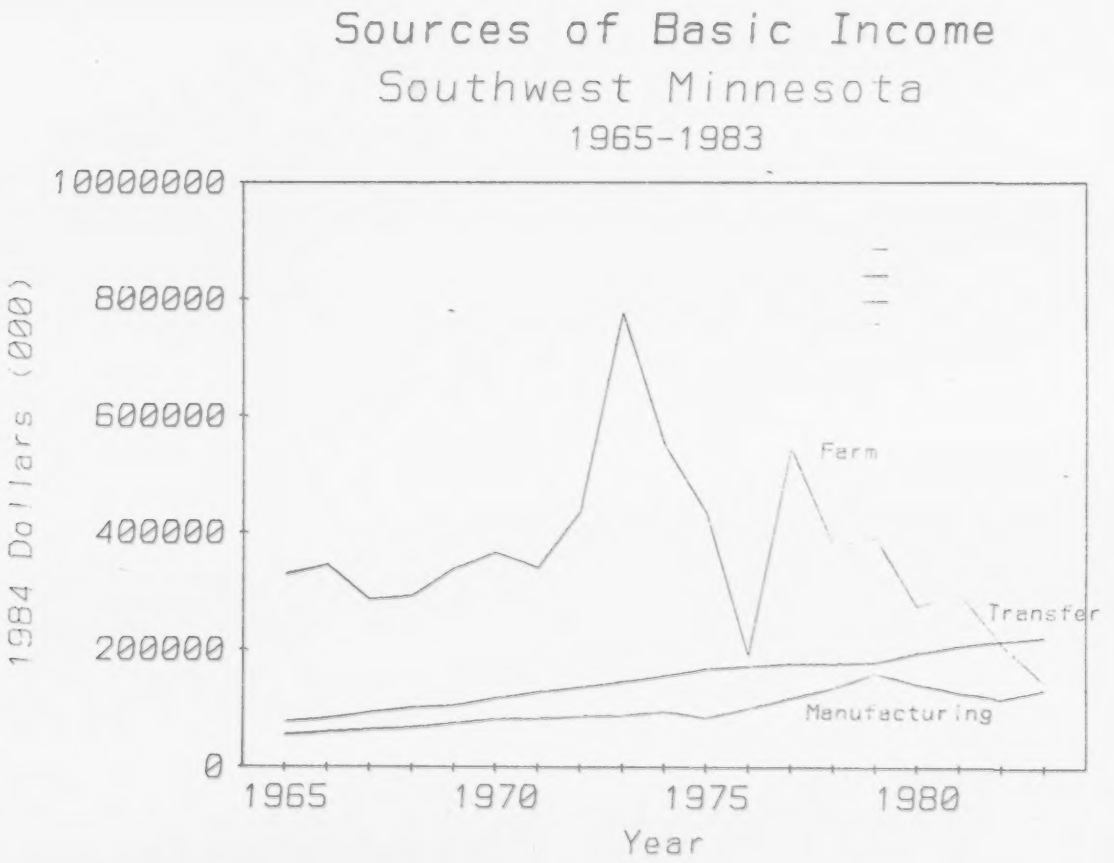
YEAR	FARM INCOME	FARM INCOME ($84)	FIVE YEAR MOVING AVERAGE
1960	$6,675	$20,471	-
1961	$6,899	$20,944	-
1962	$7,040	$21,053	-
1963	$5,066	$14,927	-
1964	$8,065	$23,419	$20,163
1965	$11,079	$31,630	$22,395
1966	$12,586	$34,920	$25,190
1967	$8,411	$22,774	$25,534
1968	$12,930	$33,685	$29,286
1969	$14,682	$36,605	$31,923
1970	$12,087	$28,800	$31,357
1971	$12,137	$27,720	$29,917
1972	$27,173	$59,889	$37,340
1973	$57,569	$120,040	$54,611
1974	$25,905	$49,050	$57,100
1975	$17,169	$30,200	$57,386
1976	$16,657	$27,875	$57,411
1977	$33,063	$52,312	$55,896
1978	$62,473	$92,348	$50,357
1979	$28,746	$38,988	$48,345
1980	$46,713	$57,517	$53,808
1981	$2,272	$2,575	$48,748
1982	$25,838	$27,644	$43,814
1983	$27,844	$28,730	$31,091
1984	$9,872	$9,872	$25,268
1985	$5,487	$5,487	$14,861

between the optimal and the actual stock of commercial property is made up each year, allowed estimation of the length of time it would take for any change in income to be fully reflected in property values.

DATA

County level national income data available from the Bureau of Economic Analysis, U.S. Department of Commerce, provided the empirical base for the study. Income and employment estimates by sector for each of the 9 counties in the study area were aggregated to annual regional totals for 1965-1983 for income and 1967-83 for employment. All income data were converted to 1984 dollars using the fixed weight personal consumption expenditure deflator. Data on commercial market values in the region were made available by the Minnesota Department of Revenue for the years 1972-1983. They were inflated to 1984 dollars using the fixed weight index for nonresidential structures.

BEA's farm income data include estimates of all sources of income including farm program payments, changes in inventories, and imputed rents on owner occupied farm housing. Imputed rents for those employed in other sectors are contained in the rents, royalties, and dividends account. As a result, agricultural income will overstate the true cash income of farmers in some years and understate it in others. Use of the five year moving average largely eliminates the inventory change problem, though leaving a slight overstatement due to the inclusion of imputed rent.


Sources of Basic Income
Southwest Minnesota
1965-1983
1984 Dollars (000)
10000000
800000
600000
400000
200000
0
Farm
Transfer
Manufacturing
1965
1970
1975
1980
Year

It is important to note that the employment data used are not full time equivalent positions, but rather number of employees. An individual holding two jobs will be counted twice, as an employee in each firm, so the number of employees exceeds the number of people actually employed. Further, the data make no distinction between full and part-time positions. Any estimates of the number of jobs created or lost should not be interpreted as full time jobs, but rather as a mixture of full and part-time positions.

RESULTS

Ordinary least squares regressions were used to estimate all equations. When necessary Cochrane-Orcutt procedures were followed to eliminate serial correlation. Results of the regressions are given in Table 4. Statistically significant equations with intuitively reasonable results were obtained for all portions of the model. The basic findings are summarized below.

Consumer Goods Sector:

Agricultural income had a significant effect on both income and employment in the local consumer goods sector. But, the impact of a change in expected, or permanent farm income was substantially less than the impact of an equal sized change in manufacturing and transfer payments. A $1000 increase in expected (the five year moving average) agricultural income, as reported by the U.S. Department of Commerce's Bureau of Economic Analysis, produced only a $23 increase in income in the local consumer goods sector. An increase of $1000 in manufacturing

Table 3: ESTIMATED EQUATIONS FOR SECTOR INCOMES AND EMPLOYMENT IN SOUTHWEST MINNESOTA

CONSUMER GOODS AND SERVICES

1. Income = 80,065 + .038 MTR + .023 AGPINC - 1946 Time
(9.67) (5.47) (2.39) (-2.14)

r^{-2} = .96 DW = 1.77 F = 118 N = 14

1a. Income = 89,898 + .19 MTR + .14 COMAG - 1338 Time
(11.03) (3.20) (2.48) (-1.19)

r^{-2} = .95 DW = 1.64 F = 69 N = 14

2. Employment = -1060 = .038 MTR + .006 AGPINC
(-1.11) (71.17) (3.96)

r^{-2} = .96 DW = 2.25 F = 156 N = 14

2a. Employment = 2616 + .029 MTR + .024 COMAG
(3.51) (8.98) (3.44)

r^{-2} = .96 DW 1.73 F = 90.76 N = 14

PRODUCER GOODS AND SERVICES:

3. Income = 47,032 + .0397 MFG + .0153 AGINC
(7.55) (5.505) (2.18)

r^{-2} = .69 DW = 2.26 F = 19 -N = 14

4. Employment = 1621 + .0028 MFG + .0018 AGINC
(4.31) (5.75) (3.60)

r^{-2} = .69 DW = 2.26 F = 19 -N = 14

62-720 O - 86 - 5

DISTRIBUTIVE SERVICES:

5. Income = -90,722 + .42 MTR + .164 AGPINC
(-2.88) (3.57) (6.01)

r^{-2} = .84 DW = 1.99 F = 23 N = 14

5a. Income = 12,702 + .15 MTR + .72 COMAG
(.77) (2.10) (4.94)

r^{-2} = .91 DW = 1.82 F = 33 N = 14

6. Employment = -4355 + .020 MTR + .0076 AGPINC
(4.4) (8.89) (4.96)

r^{-2} = .87 DW = 1.81 F = 44 N = 14

6a. Employment = 470 + .007 MTR + .033 COMAG
(.80) (5.97) (2.75)

r^{-2} = .90 DW = 1.80 F = 60 N = 14

COMMERCIAL PROPERTY VALUE

7. Commercial Value = -27,258 + .58 $CMVALUE_{t-1}$ +
(-.92) (3.11)

.68 $CGSMA_{t-1}$
(4.98)

r^{-2} = .84 DW = 2.40 F = 24 N = 10

Where:

MTR = Manufacturing Income and Transfer Payments
AGPINC = Agricultural Permanent Income (BEA)
COMAG = Agricultural Permanent Income of Commercial Farmers
MFG = Manufacturing Income
CGSMA = Moving Average of Consumer Goods and Services Income
CMVALUE = Market Value of Commercial Property

income or transfer payments produces approximately $380 additional in consumer goods expenditures. Similar differences were found with respect to employment. It took nearly a $160,000 increase in agricultural incomes to produce one additional job in the consumer goods sector, but only about a $25,000 increase in transfer payments and manufacturing income.

There were several reasons to suspect that the multiplier for farm income would be less than that for other basic sectors. As noted above BEA's definition of farm income includes imputed rent, so some of the income reported is not realized and thus, not available for spending. Further, a portion of net farm income goes for re-investment in the farm enterprise, and is not spent for consumer goods and services. If farmers allocate a larger proportion of increases in income for re-investment than do manufacturers, changes in manufacturing income will have a greater impact on incomes and employment in the consumer goods sector. Finally, and most important, many of the region's farmers have substantial off-farm incomes. For them, net income from agriculture is not used to provide for the household's basic needs, but rather to provide the extras, many of which may be purchased from outside the local economy.

An alternative income measure was used in an attempt to estimate the impact of changes in incomes of full time farmers on the local economy. That proxy variable was constructed as follows: first, the five year moving average of average income of farmers providing records to the Southwest Minnesota Farm Management Association was converted to 1984 dollars. This

series was then multiplied by the number of farmers operating on 500 or more acres. The resulting value was used as a rough estimate of the income from the region's commercial farms.

The results, shown in equation 1(a) and 2(a) confirm that changes in income for farmers primarily dependent on agricultural earnings have impacts closer to changes in manufacturing and transfer payment income. A $1000 increase in income for the commercial farmers, other things equal produces about a $120 increase in income in the consumer goods sector. It was also estimated that an increase of about $42,000 in income to the large commercial farmers, other things equal, produced a change of one job in the consumer goods sector. Again, however, it is important to note that the data do not distinguish between full and part-time jobs.

Re-defining the agricultural income variable in this way also reduced the estimated impact of changes in manufacturing income and transfer payments somewhat. In this model a $1000 increase in manufacturing income and transfer payments now yields only a $190 increase in consumer sector income, and it takes about $35,000 of increased income to produce an additional job in the local economy.

Producer Goods:

The pattern of results for the producer goods and services sector was similar. An increase in agricultural income had a smaller impact on income ($15 per thousand) than did a shift in manufacturing income ($40 per thousand). It took a change of more than $500,000 in agricultural income to produce one job in

the producer goods sector, and an increase of more than $350,000 in manufacturing income to produce the same impact.

No attempt was made to identify the impact of changes in commercial farmer's incomes on the sector since the demand for producer services was hypothesized to be directly related to the extent of farm activity, and not whether or not the farm household relied on agricultural earnings for their basic support. Transfer payments were dropped from the model in this sector as well, since no business goods or services were required to earn them.

Several alternative equations were tried in an attempt to include the number of acres harvested in the model. None were successful. There was too little variation in acreage harvested during the study period to produce statistically meaningful relationships with either income or employment.

Distributive Services:

Income and employment in distributive services were estimated as functions of permanent agricultural incomes, and manufacturing income and transfer payments, since portions of the wholesaling, transportation, communications and utilities sectors serve both consumers and producers. Again the impact of changes in agricultural incomes differed depending on whether all agricultural income was included as the dependent variable, or only the proxy for incomes of commercial farmers.

When all agricultural income was included an additional $1000 of farm income produced $166 for the distribution sector as opposed to $422 from a $1000 increase in manufacturing income and

transfer payments. When the proxy for full time farmers is used, incomes increase $720 for each $1000 increase in permanent agricultural income, and $150 for each $1000 increase in manufacturing income and transfer payments.

Employment impacts in the distribution sector have a similar result. It takes an increase of about $130,000 of permanent agricultural income as measured by BEA to produce an additional job. The same impact would be produced by about $35,000 of income per full time farmer. Again, the impact of changes in manufacturing or transfer income depends on the specification of the model. When BEA farm incomes are used, an increase of only $50,000 in manufacturing income and transfer payments produces a job. When the proxy for incomes of full time farmers is used, more than $140,000 is required.

Commercial Market Value:

The impacts of changes in agricultural income on downtown property values were estimated using a recursive framework. Commercial property values were assumed to depend on expected income in the consumer goods sector, which in turn depends on expected agricultural incomes, business incomes, and transfer payments. Expected income for the consumer goods sector was defined as the five year moving average of income in the consumer goods sector. The results, shown in equation 7, indicate that it takes 5 years for 95 percent of the change in property value attributed to a one time shock in expected income to occur. A permanent increase of $1000 in BEA based agricultural income will yield an increase of about $15 in commercial property values,

after five years about 95 percent of that increase would be worked through the system.

ESTIMATED IMPACTS

The full impact of the recent decline in farm incomes on Southwest Minnesota's economy can be found by summing the estimated changes in the consumer, producer and distributive sectors. The results obtained depend on the period chosen as the baseline.

If the average of the years 1974 through 1977 is chosen as the baseline and the level of permanent income observed in 1983 is assumed to continue in the future, that $265 million drop in farm income has produced a further decline of $47 million in local income outside the agricultural sector. It is also estimated that there are 3650 fewer jobs (full and part-time) than there would have been had farm income held at the historically high levels of 1974 to 1977. For purposes of comparison actual incomes in the local consumer, producer, and distributive goods sector were approximately $340 million, and employment, 23,099, in 1983. The eventual loss in downtown property value, coming after five years of adjustment was estimated at $3.1 million.

If one chooses a more recent period for the baseline, the impact on jobs and incomes is somewhat smaller, but still substantial. Incomes were $22 million less than if expected farm income had been held at 1979-1981 levels, and it was estimated that local commercial sector employment dropped by 1735 from what

it would have been had farm income held at those levels. Downtown property values were $1.5 million less.

The model's estimates show that the decrease in agricultural incomes in rural Minnesota has had a substantial impact on local employment and income. The local economy would have suffered even more had not transfer payment income increased substantially during the period. The actual estimates of the impacts of the drop in farm income, however, should be viewed as only indicative of the size of the impacts.

There are several reasons for caution in using these estimates. First, the estimates are based on data covering a relatively short time period, most of which was dominated by increasing agricultural incomes. If responses are not symmetric, that is if employers do not hire and layoff at the same rate during periods of expansion and cutbacks, then the estimated impacts of decline could be either over or understated. There is some evidence that such decisions are assymmetric and that multipliers are different in growing and declining counties. Those estimates are based on cross sectional data, however, not on a time series of a regional economy.

A second, more important reason for caution, relates to the nature of the shutdown decision for local enterpreneurs. A basic result of micro-economic theory is that firms will stay in operation in the short-run, even if they are not making a profit, as long as they cover variable costs and a portion of their fixed costs. As a result, one would not expect to observe the instantaneous shutdown of local businesses when times turn bad.

Instead, firms would likely operate at a loss for some time while the owner tries to determine whether prospects improve. At some point, however, unless the firm becomes profitable again the decision maker must shift from a short run to a long run decision and decide to shutdown.

Casual empiricism leads one to surmise that the typical downtown businessman in rural America had not shifted from a short to a long run perspective through 1985. The prospect of a new farm bill with the potential for substantial supplements to farm income probably kept a number of downtown businesses operating, hoping that times would soon get better. Passage of a farm program that is estimated to allow further deterioration of farm income in Minnesota over the next 5 years, may have shifted some from that short run to a long run perspective. An increasing number of businesses may shutdown this year rather than continue to lose money. If this occurs, a substantially larger loss of jobs in the commercial sector over the next 18 months will be observed than would have been expected based on changes in permanent agricultural income in the region.

APPENDIX C*

Property Tax Delinquency: Statutory Provisions

State statutes providing for collection of delinquent property taxes are similar in approach. Generally, properties are assessed a penalty upon delinquency. Shortly thereafter they are sold at a tax sale to recover taxes and costs. The owners are then allowed from two to five years for redemption before the deed is lost to the purchaser of delinquent taxes or to the county acting in place of a purchaser. A brief description of the specific provisions in each of the sample states is provided below, with the applicable statutes denoted in parentheses. While some of the provisions may equally apply to personal property collections, reference is made to real property only.

Arkansas

Real property taxes can be paid in three installments. One-fourth is due on the third Monday in April in the year succeeding the tax levy. Another quarter is due on the third Monday in the following July, and the remaining one-half is due on the tenth day of the following October. (Arkansas Statutes Annotated 84-913) If the full amount is not paid by October 10, the taxpayer is in noncompliance with this installment schedule.

A 1983 law removed the practice of a tax sale for collection of delinquent taxes and costs. Currently, the county must hold all tax-delinquent land for two years from the tax due date. (84-1126) If the property is not redeemed within this period, the land is transferred to the Commissioner of State Lands. The

state must hold the land for an additional redemption period of no less than two but not more than three years before the land is sold. The first scheduled land sale is set for the fall of 1987.

All unpaid tax balances are assessed a 10% penalty plus a 10% per annum interest charge. (84-1126) Taxes paid on redeemed land plus interest are returned to the county and apportioned in the same percentage as the original tax levy to the various governmental subdivisions. The penalties are kept by the state. (84-1131).

Iowa

Property taxes can be paid in two installments, one before September 1 in the year following the levy year, and the other before March 1 of the next year. (Iowa Code Annotated 445-6) Tax installments are considered delinquent as of October 1 and April 1 following the due dates. (445-37) On the third Monday in June after the April deadline, properties which remain delinquent are offered for tax sale to recover taxes and other charges. (446.7) After tow years and nine months, the purchaser at a tax sale can serve notice to the owner that the right of redemption will expire in ninety days, and the deed will be claimed. (447.9) If the property remains unsold at tax sales for two years or more, then at the next regular tax sale, the property is listed for "scavenger sale" to the highest bidder. (446.18) However, if the property remains unsold or if the bid does not cover taxes and other charges, the county must purchase the real estate although no money need by paid. (446.19) The owner of property sold at a scavenger sale has nine months to redeem before the

purchaser can serve notice that ninety days remain for redemption. (447.9)

Interest changes on delinquent real taxes are 1% per month until paid. (445.39) Interest and penalties are apportioned to the county general fund. Compensation for delinquent tax collectors is paid from this fund. (445.52)

Kansas

Real estate taxes can be paid in two installments. If not paid in full, one-half is due on or before December 20 in the year of the levy, and the other on or before June 20 in the following year. (Kansas Statutes Annotated 79-2004) On or after the first Tuesday of September, the county holds a tax sale, but all tax-delinquent properties are "bid-off" solely to the county. (79-2302 and 79-2306) The owner then has two years from the date of the tax sale to redeem (three years to homesteads). (79-2401)

Prior to 1986, the county board of commissioners was charged with initiating proceeding to sell tax-delinquent land after the redemption period expired, but they had discretion in deciding whether to sell lands of assessed valuation of less than $10,000. (79-2801) Recent changes give the county board descretion over lands with less than $300,000 in assessed valuation or with less than $10,000 in taxes. (79-2801)

Delinquent taxes incur an interest charge of one and one-half percent per month. (79-2968) Interest is assigned to the county general fund except where agreement is reached with a city for payment to the city of interest collected on special assessments. (79-2004)

Minnesota

Real property taxes over $50 can be paid in four installments in the year of the tax levy as follows: One-fourth prior to March 16, one-fourth prior to May 16, one-fourth prior to August 16, and the remaining one-fourth prior to October 16. (Minnesota Statutes Annotated 279.01) To avoid delinquency penalty, one-half must be paid before May 16 and the other before October 16.

Should taxes remain unpaid, a delinquency list is published on or before March 20 of the following year. Upon completion of the list publication, the court acquires "full and complete jurisdiction" to enforce the taxes and penalties upon the property. (279.09 and 279.14) The owner or other persons having interest in the property then has twenty days to answer to the district court, "setting forth his defense or objection to the tax or penalty" against the land. (179.15) If there is no answer, the court enters a judgement against the land; if an answer is provided, the issue raised stands trial shortly thereafter. (279.16 and 279.17)

On the second Monday in May, the county auditor sells lands with judgements against them to the state for taxes and costs. However, at any time thereafter but prior to redemption, anyone can purchase the land from the state by paying the same amount of taxes and costs plus accepting 125% interest as the charge to the property owner. (280.01 and 280.11) Three years from the date of the tax sale, a purchaser can initiate proceedings to claim the deed. (281.13) Land left assigned to the state and left

unredeemed for three years from the date of the tax sale is sold on the second Monday of August of each year to the highest cash bidder, but not for a sum less than the taxes and other charges. (280.13) A purchaser may then initiate proceedings to obtain the deed. (280.25)

Penalties for delinquency are as follows: If one-half is not paid prior to May 16, a penalty of four percent accrued on both homestead and nonhomestead property plus penalties of two percent on homestead and four percent on nonhomestead for each additional month of delinquency up to and including December 16. (279.01)

Missouri

Unpaid real estate taxes are delinquent on the first day of January of the year following the levy. (Vernon's Annotated Missouri Statutes 140.010) On the fourth Monday in August, all tax-delinquent land is subject to sale to recover taxes and other charges, and a purchaser may claim the deed after a redemption period of two years. (140.150 and 140.420) If there is no bid sufficient to cover taxes and costs for two successive years, the collector, at the next regular tax sale, accepts the highest bid, and the purchaser can initiate proceedings to obtain the deed without allowing for an additional redemption period. (140.250)

Delinquent taxes incur a 2% penalty and a graduated interest charge not to exceed 18% per year. If delinquent taxes are paid before a tax sale, the interest charge is not to exceed 2% per month. (140.000 and 52.290) Interest payments are allocated to the various governmental units in the proportion of taxes owned, but penalties are kept by the collector.

Montana

Taxes levied can be paid in two installments. The first half is considered delinquent after November 30 of the levy year, and the second half on May 31 of the following year. (Montana Code Annotated 15-16-102) Between 21 and 28 days after the last Monday in June, properties, upon which delinquent taxes are a lien, are sold. (15-17-101) The property may be redeemed by the owner within thirty-six months from the date of sale, or after this, at any time prior to the notice of application for the tax deed by the purchaser. (15-18-101) If the property remains unsold for taxes, the county is considered the purchaser and may apply for tax deed after the redemption period has expired. (15-17-207 and 15-18-203)

Delinquent taxes draw interest at the rate of 5/6 of 1% per month until paid and incur a 2% penalty. (15-16-102) Tax interest and penalties are distributed to the various governmental subdivisions in the same ratio as the original tax. (15-18-108)

Nebraska

Real property taxes can be paid in two installments. In counties with populations less than 100,000, the first half becomes delinquent on May 1 in the year following the tax levy and the second half on September 1. (Revised Statutes Nebraska 77-204) Prior to 1986, if taxes remained unpaid, the property was listed for tax sale to begin on the first Monday in November. (77-1802) A change in 1986 law, however, provides that the tax sale begin on the first Monday in March in the following year.

If the property is not redeemed by the owner within three years from the date of the tax sale, the purchaser can take action to claim the deed. (77-1837) Should the property remain unsold at tax sales for three succession years, the county may then foreclose its tax lien. (CCH Neb. Tax Reporter 23-705) In rural counties, generally, it should be noted that most properties are not bought by individuals at tax sales, and the county as subsequent holder of the lien, does not move immediately after three years to foreclose.

Delinquent taxes incur a 14% per annum interest charge. (45-104.01) The interest collected is distributed to the various governmental subdivisions in the same proportion as the principal of the taxes owed. (77-1772)

North Dakota

Property taxes can be paid in two installments. The first is considered delinquent after March 1 in the year following the levy, and the second after October 15. (North Dakota Century Code 57-20-01) On the second Tuesday in December, a tax sale commences where tax-delinquent property is sold to the bidder who will pay the taxes and costs and accept the lowest rate of interest (not to exceed 9%). (57-24-12) After three years from the date of purchase of a tax sale certificate, the purchaser may initiate proceedings to obtain the deed if the property has not been redeemed. (57-27-02) If there is not a bidder on a property, the county becomes the purchaser, and after three or more years and before June 1 in the given year, the county may initiate proceedings to obtain the deed. (57-24-14 and 57-28-01) The

county's annual sale of land acquired by tax deed is held on the third Tuesday of November. (57-28-13)

Delinquent first installment taxes are assessed a three percent penalty initially, with an additional three percent levied upon May 1, July 1, and October 15 for taxes remaining unpaid. The second installment is assessed a six percent penalty, and after January 1 of the following year, all unpaid taxes are charged 12% simple interest. (57-20-01) Penalties and interest are distributed to the county general fund except on taxes due to townships, cities, and school and park districts.

Additional Considerations

Several other general state provisions not included in the above summaries deserve brief mention and comment. Two of the most important are the interest earned by a purchaser at a tax sale and the payment requirements by an owner to prevent foreclosure. For states with tax sales, the purchaser of aproperty that is redeemed is entitled to recover his costs plus interest charges. However, it should be noted that if this interest rate is lower than market, tax purchases may be discouraged.

Payment requirements by an owner to prevent foreclosure are another potential problem in collection of delinquent taxes. Without specific mandates from the state, property owners may be able to prevent foreclosure by simply paying one year of delinquent taxes, and conceivably could remain, for some states, up to three years behind without fear property loss.

*This Appendix was prepared by Jeff Fortenberry.

APPENDIX D

TARGETED FISCAL ASSISTANCE

The formulas for distributing funds under the targeted fiscal assistance (TFA) program revise, improve, and simplify the General Revenue Sharing (GRS) formulas. TFA targets funds to communities with the greatest need by using more appropriate measures of need and fiscal capacity. As with GRS, TFA has an interstate formula to determine each state's allocation and an intrastate formula to allocate funds to local government within the state.

Under the interstate formula low income, low fiscal capacity states will receive a greater proportion of funds than will higher income, high fiscal capacity states. A single formula based on population, tax effort, and fiscal capacity determines the total allocation for all communities in a state. TFA's formula modifies the GRS measure of population by giving additional weight to that portion of the population with income less than 150 percent of the poverty level. This change helps to better reflect local needs. TFA also utilizes a more comprehensive and appropriate measure of fiscal capacity called taxable resources.

Under GRS all communities receive revenue sharing funds. With TFA the intrastate formula will target funds to those communities with the greatest needs, while restricting and, in some cases, even eliminating aid to jurisdictions with high fiscal capacity. TFA's formula cuts off grants to the

relativelywealthy communities with per capita income above 125 percent of the state average. At the same time, the cap on grants to poor, high tax effort jurisdictions will be set at 200 percent of the state's average per capita grant. Presently GRS sets a cap of 145 percent.

TFA's interstate and intrastate formulas, given below, the direct greatest proportion of aid to poor rural and urban communities, particularly those with above average tax effort relative to need. Its impact on the agriculturally dependent counties examined in this study is given in the tables which follow.

TARGETED FISCAL ASSISTANCE PROGRAM FORMULAS

Interstate Formula

$$\text{State Share} = \frac{\text{state pop.} \times \text{state general tax effort} \times \text{state fiscal gap factor}}{\Sigma(\text{state pop.} \times \text{state tax efforts} \times \text{state fiscal gaps})}$$

Where

State pop. = population of state + population with family income less than 150% of poverty level

General tax effort = $\frac{\text{per capita adjusted taxes of the state}}{\text{per capita total taxable resources of the state}}$

Relative Fiscal Gap Factor =

$$2.0 \times \frac{\text{total TTR of U.S.}}{\text{total pop. of U.S.}} - \frac{\text{TTR of state}}{\text{total pop. of state (adjusted)}}$$

OR

2.0 X U.S. per capita TTR - state per capita TTR

TTR = Total Taxable Resources

= Gross state product plus income earned by state residents from assets located out of state

Intrastate formula

$$\text{Community Share} = \frac{\text{pop. of unit} \times \text{unit's general tax effort} \times \text{relative income factor}}{\Sigma(\text{pop. of unit} \times \text{general tax effort} \times \text{relative income factor})}$$

Where

$$\text{General tax effort} = \frac{\text{per capita adjusted taxes}}{\text{per capita income}}$$

Relative income factor

$$1 - .80 \times \frac{\text{pci of unit}}{\text{pci of state}}$$

(If less than zero, then zero.) This factor establishes cutoff point of 124 percent of state average per capita income.

TFA's formulas produce the following results

The minimum allotment is eliminated. Communities which would receive less than 5 percent of the state average per capita grant receive no funds.

The cap is raised to 200 percent of the per capita entitlement for the state. Jurisdictions may receive up to twice the state average grant.

Jurisdictions with average per capita incomes 125 percent or more of the state average receive no funds.

Per capita adjusted taxes of a unit of government (county, city, township) shall not exceed 200 percent of the average per capita adjusted taxes of like units of government in the state.

APPENDIX E

TABLE 1: COMPARISON OF FUNDING LEVELS UNDER GENERAL REVENUE SHARING AND TARGETED FISCAL ASSISTANCE, ARKANSAS, CRD6.

COUNTY	PER CAPITA ALLOCATION UNDER GRS	PER CAPITA ALLOCATION UNDER TFA	PERCENT CHANGE	COUNTY PER CAPITA INCOME (PCI)	PCI AS PERCENT OF STATE
ARKANSAS	$3.85	$5.39	40.0	7362	99.6
CRITTENDEN	$4.51	$8.60	90.6	6212	84.1
CROSS	$5.50	$9.99	81.7	6467	81.7
LEE	$9.07	$22.41	147.1	4155	56.2
LONOKE	$3.59	$5.63	56.8	4042	95.3
MONROE	$4.84	$13.08	170.3	5067	68.6
PHILLIPS	$6.43	$22.41	248.7	5064	68.5
PRAIRIE	$6.32	$12.63	99.7	5901	79.9
ST.FRANCIS	$4.31	$9.84	128.0	5660	76.6
WOODRUFF	$8.59	$17.79	107.0	5581	75.5

APPENDIX E

TABLE 2: COMPARISON OF FUNDING LEVELS UNDER GENERAL REVENUE SHARING AND TARGETED FISCAL ASSISTANCE, IOWA, CRDI.

COUNTY	PER CAPITA ALLOCATION UNDER GRS	PER CAPITA ALLOCATION UNDER TFA	PERCENT CHANGE	COUNTY PER CAPITA INCOME (PCI)	PCI AS PERCENT OF STATE
BUENA VISTA	$5.99	$6.07	1.3	8772	96.7
CHEROKEE	$6.78	$7.49	10.5	8423	92.9
CLAY	$4.88	$4.15	-15.0	9305	102.6
DICKINSON	$7.25	$5.92	-18.4	9411	103.8
EMMET	$5.54	$6.29	13.6	8297	91.5
LYON	$8.11	$11.44	41.1	6570	72.5
O'BRIEN	$5.61	6.70	19.4	8032	88.6
OSCEOLA	$10.89	$16.01	47.0	7646	84.3
PALO ALTO	$8.52	$10.76	26.3	7681	26.3
PLYMOUTH	$4.56	$4.87	6.8	8565	94.5
PONCHANTAS	$7.09	$7.92	11.8	8370	92.3

APPENDIX E

TABLE 3: COMPARISON OF FUNDING LEVELS UNDER GENERAL REVENUE SHARING AND TARGETED FISCAL ASSISTANCE, KANSAS, CRD3.

COUNTY	PER CAPITA ALLOCATION UNDER GRS	PER CAPITA ALLOCATION UNDER TFA	PERCENT CHANGE	COUNTY PER CAPITA INCOME (PCI)	PCI AS PERCENT OF STATE
CLARK	$8.90	$7.74	-13.1	8690	91.9
FINNEY	$7.39	$7.48	1.3	8560	90.5
FORD	$4.17	$3.99	-4.2	8779	92.8
GAANT	$10.26	$7.57	-26.2	8742	92.4
GRAY	$9.29	$9.27	-0.3	8258	87.3
HAMILTON	$10.64	$11.71	10.0	7650	80.9
HASKELL	$8.76	$10.58	20.8	7920	83.7
HODGEMAN	$10.94	$13.12	19.9	7339	77.6
KEARNY	$10.49	$10.40	-0.9	7965	84.2
MEADE	$6.80	$11.97	76.0	7578	80.1
MORTON	$10.03	$6.54	-34.9	9064	95.8
SEWARD	$3.83	$2.83	-26.1	9700	102.5
STANTON	$10.15	$12.93	27.4	7378	78.0
STEVENS	$9.14	$7.71	-15.6	8700	92.0

APPENDIX E

TABLE 4: COMPARISON OF FUNDING LEVELS UNDER GENERAL REVENUE SHARING AND TARGETED FISCAL ASSISTANCE, MINNESOTA, CRD7.

COUNTY	PER CAPITA ALLOCATION UNDER GRS	PER CAPITA ALLOCATION UNDER TFA	PERCENT CHANGE	COUNTY PER CAPITA INCOME (PCI)	PCI AS PERCENT OF STATE
COTTONWOOD	$8.39	$9.95	18.6	8330	85.3
JACKSON	$10.25	$15.85	54.6	7567	77.5
LINCOLN	$10.28	$19.45	89.2	6116	62.6
LYON	$6.06	$7.54	24.5	7935	81.3
MURRAY	$9.31	$13.47	37.3	7004	71.7
NOBLES	$7.72	$9.43	22.1	8100	82.9
PIPESTONE	$11.11	$16.71	50.3	7095	72.7
REDWOOD	$9.10	$11.52	26.6	7815	80.0
ROCK	$10.98	$14.62	33.2	7463	76.4

APPENDIX E

TABLE 5: COMPARISON OF FUNDING LEVELS UNDER GENERAL REVENUE SHARING AND TARGETED FISCAL ASSISTANCE, MISSOURI, CRD2.

COUNTY	PER CAPITA ALLOCATION UNDER GRS	PER CAPITA ALLOCATION UNDER TFA	PERCENT CHANGE	COUNTY PER CAPITA INCOME (PCI)	PCI AS PERCENT OF STATE
ADAIR	$2.40	$3.19	33.1	7320	81.3
CARROL	$3.13	$4.42	41.2	6811	75.6
CHARITON	$2.48	$3.38	36.3	7153	79.4
GRUNDY	$3.05	$4.25	39.3	6790	75.4
LINN	$0.97	$1.28	32.6	7392	82.1
LIVINGSTON	$2.62	$3.40	29.7	7563	83.9
MACON	$3.59	$4.71	31.4	7450	82.7
MERCER	$4.54	$8.12	78.8	5459	60.6
PUTNAM	$5.24	$8.30	58.4	5798	58.4
RANDOLPH	$3.09	$3.99	29.4	7581	84.1
SCHUYLER	$6.38	$9.33	46.3	6025	66.9
SULLIVAN	$4.21	$6.03	43.1	6050	67.2

APPENDIX E

TABLE 6: COMPARISON OF FUNDING LEVELS UNDER GENERAL REVENUE SHARING AND TARGETED FISCAL ASSISTANCE, MONTANA, CRD3.

COUNTY	PER CAPITA ALLOCATION UNDER GRS	PER CAPITA ALLOCATION UNDER TFA	PERCENT CHANGE	COUNTY PER CAPITA INCOME (PCI)	PCI AS PERCENT OF STATE
BLAINE	$10.87	$28.80	159.3	5953	74.7
CHAREAU	$14.32	$15.13	5.7	8479	106.4
GLACIER	$5.59	$28.18	404.3	6117	76.7
HILL	$5.86	$6.81	16.2	8361	104.9
LIBERTY	$15.54	$19.01	22.3	8167	102.5
PONDERA	$10.25	$12.60	23.0	8180	102.6
TETON	$12.93	$17.59	36.0	7743	97.1
TOSLE	$14.57	$22.65	55.5	7894	99.0

APPENDIX E

TABLE 7: COMPARISON OF FUNDING LEVELS UNDER GENERAL REVENUE SHARING AND TARGETED FISCAL ASSISTANCE, NEBRASKA, CRD3.

COUNTY	PER CAPITA ALLOCATION UNDER GRS	PER CAPITA ALLOCATION UNDER TFA	PERCENT CHANGE	COUNTY PER CAPITA INCOME (PCI)	PCI AS PERCENT OF STATE
ANTELOPE	$9.26	$16.31	76.2	5878	65.7
BOONE	$10.39	$13.51	30.0	7018	78.4
BURT	$7.38	$11.71	58.8	7383	82.5
CEDAR	$9.68	$13.42	38.7	5758	64.3
CUNNING	$6.87	$11.20	62.9	6402	71.5
DAKOTA	$3.10	$3.59	15.6	7884	88.1
DIXON	$8.34	$16.31	95.6	6126	68.5
KNOX	$7.33	$16.31	122.5	5156	57.6
MADISON	$3.15	$3.17	0.5	8535	95.4
PIERCE	$9.16	$12.45	36.0	6368	71.2
THURSTON	$5.81	$15.30	163.4	5570	62.2
WAYNE	$7.73	$109.46	35.3	6478	72.4

APPENDIX E

TABLE 8: COMPARISON OF FUNDING LEVELS UNDER GENERAL REVENUE SHARING AND TARGETED FISCAL ASSISTANCE, NORTH DAKOTA, CRD9.

COUNTY	PER CAPITA ALLOCATION UNDER GRS	PER CAPITA ALLOCATION UNDER TFA	PERCENT CHANGE	COUNTY PER CAPITA INCOME (PCI)	PCI AS PERCENT OF STATE
DICKEY	$10.16	$17.44	71.7	6785	75.5
LAMOURE	$8.67	$12.47	43.8	7567	84.2
LOGAN	$10.02	$17.44	74.0	5764	64.2
McINTOSH	$11.18	$17.44	56.0	6946	77.3
RANSOM	$8.82	$11.07	25.6	8009	89.2
RICHLAND	$5.51	$5.33	-3.2	9062	100.9
SARGENT	$8.94	$12.08	35.2	7631	85.0

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62-720 (172)